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THE COURSE OF THE WORLD'S TRADE FROM THE SIXTEENTH TO THE TWENTIETH CENTURY*

A HISTORY of the world's trade has to do with the development of four centuries at most. This is evident, for one must not overlook that the condition of such a history is the existence of communications between the peoples of the earth. During ancient times and the Middle Ages such communications were far from existing. The district in which during ancient times a continuous stream of traffic flowed to and fro was spatially a narrow one, namely, the Mediterranean and the countries bordering upon the Arabian Sea and its arms, the Red Sea and the Persian Gulf. Besides this there existed on the Pacific the Chinese-Mongolian trade district. But the connections between both of these districts by land and sea were very insignificant and nothing can be proved of a mutual and permanent influence between the European and the Mongolian cultures. In the Middle Ages certainly the European-Asiatic trade district became enlarged toward the north, so as to comprehend the whole of Europe. On the other hand the relations of this district to the Mongolian trade district were much intensified by the commercial activity of the Arabians

* Inaugural address of Ernst Daenell, Ph.D., professor of Mediaeval and Modern History in the University of Kiel, Kaiser-Wilhelm professor for 1910–11, delivered at the opening exercises of the 157th academic year, September 28, 1910.

in southern Asia. And moreover the knowledge which the inhabitants of the Mediterranean and Arabian district possessed with regard to the Far East was greatly augmented. But in the times when each man had only a fractional idea of the whole earth, it is hardly possible to speak of a world trade. Thus a world trade could only start after the discovery of America and the Pacific, that is, after the sixteenth century. The expedition of Magellan, which rounded the earth, finding its way back to Cadiz, the port of its embarkation, is the most epochal event from this point of view.

When we regard the gradual enlargement of the trade zone, until finally it embraces the world, we shall have to make a further observation. It is the Europeans, namely members of the Romanic and Germanic nations of Europe who carry out the discoveries. It is they who take into possession the treasures of the New World and make their race dominant there. It is they who destroy the mastery which during the Middle Ages the Arabians had possessed over the commerce between Europe and Asia, by forcing their way round the Cape to southern Asia directly. It is they who, far down into the seventeenth century, attain and exercise a strong influence in the religious field among the Mongolian peoples, and so far as the Mongolians have since then participated in the trade of the world, it has been through the agency of Europeans. In short, the Europeans spread over the whole earth which was gradually discovered since the sixteenth century, they create the world's trade and they develop it to an enormous intensity. And it is the same thing with the development of culture in general, of which trade forms a part. The vitality of the European-Arabian culture during the last four centuries has proved immensely superior to the Islamic and Mongolian. Compared with the Christian and European expansion both the Islamic and Mongolian civilizations show stagnation and decline, at any rate no successful activity outside their own provinces. It is true, the present rise of Japan gives us an only too eloquent evidence of a strong vitality in the Mongolian race, but it must sharply be emphasized that it is the acceptance of the methods and civilization of the Romano-Germanic races of Europe and North America which has enabled the Japanese to succeed.

Thus it is European nations with which a history of the world's trade has to do. Whereas the center of the mediæval trade was hither Asia and the Arabians were its principal carriers, after the conditions for a real world's trade came into existence the center was in Europe. I need hardly mention that the transformation from a merely Old World trade to a transoceanic one was realized slowly, very slowly, among the European peoples. In other words, compared with the inter-European trade the transoceanic remained very poor for a long time. For it took a whole century, until other European peoples began to contest seriously the rights and claims of the Spaniards and Portuguese to a monopoly of the transoceanic trade and of colonial possessions. And it took about two centuries again until the Germanic and Romanic Americas threw off the yoke of the colonial government of the Europeans, thus putting by the side of the Germanic and Romanic nations of Europe a considerable number of new and independent commonwealths of the same stock in the New World. And it was only at this juncture that the southern continent Australia received its first white settlers. Thus it was only one century ago that the general political conditions were fixed, under which the world's trade has since developed so magnificently. Certainly the non-European part of the world's trade has very considerably increased compared with the inter-European one especially during the past century. This increase corresponds of course to the development of the New World, then almost totally unexploited. But it would be a serious mistake to suppose that Europe has resigned her place as the real center of the world's trade, or that it will do so in the near future. It has taken centuries for the discoveries and the colonies to react with an important influence upon Europe politically and economically and up to the present time Europe has not lost its central position on earth either from the commercial or from the political point of view or more than that with regard to human culture.

At no time has the struggle for predominance in the world's trade been wanting among the European peoples and to these since the last century we must count the people of the United States. This struggle has almost ceaselessly influenced the course of the world's trade and has been carried on with peaceful and warlike means. If the circumstances rendered the adoption of the peaceful means of tariffs, prohibitions and so on impracticable, political and military force was called in. And many severe wars during these centuries, and especially during the seventeenth and eighteenth, have been waged for commerce, shipping and colonies.

This however leads us to the question as to the periods in the history of the world's trade. One might periodize it this way: by placing in the center of our view in each chapter of the story that nation which for the time enjoyed the hegemony of the world's trade. Thus, first epoch, the Pyreneen peoples, the Spanish and Portuguese. But it is only with very great reservations that one can speak of their predominance in the sixteenth century. We can only speak of them as predominant by putting stress upon the fact that they during that century exercised a monopoly in colonial possessions and colonial trade. On the other hand they lacked a merchant marine dominant in Europe and moreover they lacked industries which would give their economy a strong support at home and abroad. After the Pyreneen peoples the second epoch would be comprised in this method of classification by the Dutch. The period of their predominance embraced roughly the seventeenth century. They made themselves masters of the greater part of the colonial trade of Europe. They were the dominant people in European shipping, a predominance such as has never been attained before or after by any people to such an extent. And at home they developed flourishing industries and a great money market for the needs of the other nations. The third epoch would be formed by the predominance of the English during the eighteenth and nineteenth centuries. Shipping, commerce, industries, capital, colonies, in all these directions the English predominance was established instead of the Dutch, and up to the present day, although slowly declining, it has been maintained.

A classification like this would be absolutely unfortunate, because it is superficial, it does not reflect the great originating forces of the evolution. From this more dynamic point of view another classification may be suggested. The Renaissance of the fifteenth and sixteenth centuries produces an individualism most strongly in religious life, an individualism by which the sixteenth century is characterized as a new epoch, as the beginning of modern times. This individualism is not wanting in economics either. For whereas in the Middle Ages the prevailing economic form is that of labor for mere livelihood, first on the soil, then by manufactures, since the later Middle Ages a new form has asserted itself, which is characterized by the preponderance of commercial activity and the leading principle of which is the idea that the aim of business is not only livelihood but rather the accumulation of money as such. The private business of all modern times has been mainly directed by this purpose. Alongside of this commercial individualism, which in the sixteenth century manifested itself by an unexampled recklessness, we see the mediæval collectivism of Spain, based on the nobility and clergy and on the suppression of the middle classes. Closely allied with the international commercial individualism of the great German and Italian banking houses this Spanish collectivism dominated Europe. And during the same sixteenth century other states by governmental regulation began to promote their own commercial and industrial classes, their foreign trade and the wealth of their subjects; in other words they began to establish nationalities, strong and concentrated, which while remaining economically independent of foreign countries were to export to them as many manufactured articles as possible. But the chief aim of the state governments was this: to give the national finance a strong basis by encouraging foreign trade and the growth of the middle classes in order to the realization of great political ambitions.

Therefore it results from what I have said, that the sixteenth century is characterized by the struggle of three forces, which together were of the greatest influence on the world's commerce. At the end of this epoch the mediæval collectivism of Spain quits the field as a condominant factor forever, the international commercial individualism of the Germans and Italians collapses. As the dominant force of the seventeenth and eighteenth centuries there remains the third of those factors, that is, the state governments, which have made the economic individualism of their subjects serve their own purposes or, to give the term, there remains the national mercantilism of the different states. Thus the first epoch of the world's trade, which brings about the conflict and the issue between collective and individual, mediæval and modern organizations and principles and which embraces the sixteenth century, is followed by a second epoch, that of the mercantilism of the seventeenth and eighteenth centuries, an epoch in which the world's commerce is dominated by political aims. Between the individual and the world's trade there now intervene the state and the national interests. The whole of mercantilism can be condensed into the one sentence, formulated already in 1436 in the famous "libell of Englishe policye":

> For if marchauntz were cherished to her spede,
> We were not like to fail in any nede,
> If they be rich, than in prosperitee
> Shal be our land, lordes and comontee.*

And the mercantilist theories find their perfect interpretation in 1664 in the book of an English merchant, Thomas Mun, which is inscribed: "England's treasure by foreign trade." Here foreign trade is declared to be the indispensable condition for the welfare of the states in all directions. And because every state intended to establish a public economy as independent and complete as possible, each separated itself from the others by high tariff walls and by prohibitions. This policy then compelled the states to acquire colonies in order to provide their home needs with raw materials and with the much desired colonial articles of consumption and to procure markets for their home industries. These are the ultimate reasons for the feverish rivalry for colonies among all powers which marks the seventeenth and eighteenth centuries.

It is true the commercial predominance and economic bloom of the Holland of the seventeenth century does not correspond to this type of a severe governmental mercantilism. For in Holland the individualism of the cities and merchants retained the upper hand and prevented the state from becoming consolidated. And Dutch commerce was superior to the other states until these had developed their commercial and political resources and were able to shake off the Dutch supremacy. And in the employment of all the means of the mercantilistic policy no state acted with a greater ruthlessness than England, which by these means has made herself since the end of the seventeenth century the center of the world's trade.

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* Ed. Hertzberg, Leipzig, 1878, 482–485.

But as early as the eighteenth century the excess in governmental regulation of every kind started a gradual reaction. This reaction is closely connected with the eighteenth century doctrine of individual freedom. The disciples of the new gospel were the middle classes, which, now trammeled by the mercantilism which had built up their power, opposed the governmental absolutism by the natural right of the individual to liberty. It was in England, where mercantilism had been most sharply put in force that the demand for the liberty of trade, as is well known, was given its classic formulation by Adam Smith in his "Inquiry into the nature and the causes of the wealth of nations" published in 1776. Here as a corollary to the general movement of the illumination we have a proclamation of natural rights in trade also. According to Smith and his followers there exist only on the one hand the individuals, on the other the world economy. That, which hitherto had formed the dominant factor between both, namely the states and their national interests, was theoretically at least abolished.

In practice this new epoch, the third, in the world's trade dawned in the nineteenth century, when the theories of Adam Smith were realized. The freetrade ideas mastered the commercial policy of the states if not as in England totally, at least to a considerable extent. Once more individualism gained the upper hand, as in the sixteenth century, but now also only for a short while. Notwithstanding this short chapter forms an epoch, which embraces a series of decades up to about 1875.

But even before the individualistic principles of free trade gained general recognition, a thinker arose, who in striking dissertations once more opposed individualism by the national interests of the states, which had been neglected by the freetrade doctrine. He again defended collectivism and the protection of the national production by advocating tariffs. I mean the German Friedr. List in his equally classic book "Das nationale System der politischen Ökonomie," published in 1841.

And as this movement spread, the further development since about the seventies of the nineteenth century has gradually turned again to protection. Again protection is the leading principle of the commercial and financial policy of the states. Again national interests are the dominant factor. After a short life the freetrade individualism has yielded to a protectionist collectivism and just as in the mercantilistic epoch and resulting from equal causes now also a new and extremely strong greed for colonies and foreign markets has made its appearance. The sum of all the characteristic features of this present fourth epoch is termed imperialism. Indeed there is a great difference between mercantilism and imperialism. The imperialistic tendencies have been, hitherto at least, far from being carried out with that enormous ruthlessness of the mercantilistic age. However, nobody can predict how things may turn out in the future. And there is a further difference in the states which participate in imperialism. Mercantilism was a matter of all the states; almost all of them were striving for colonies. Imperialism is the ambition of only a few. But these are no longer merely Romanic or Germanic nations, which hitherto have dominated the world's commerce totally, but the Mongolian race, represented by Japan, and the Slavic nationality, represented by Russia, are participating in imperialism alongside of the United States, France, Germany and England. And just as Holland once in the beginnings of the mercantilistic epoch remained the follower of a former form of economy, falling behind only after the other states had developed a superior strength by the new political methods, so in the beginning of the present epoch England stands on the ground of a former form of economy, though she still is the leading factor in the world's commerce. And which way things will take nobody as yet can predict.

ERNST DAENELL

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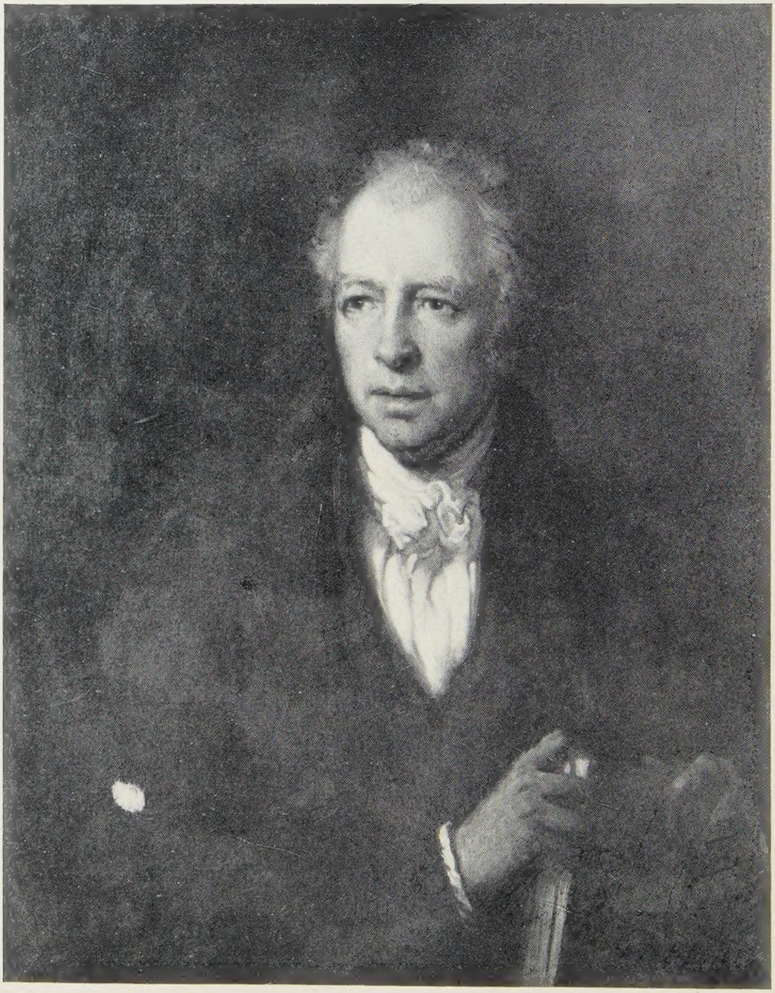


JAMES KENT, LL.D. 1797
Professor of Law, 1793–1798, 1823–1847
Chancellor of the State of New York, 1798–1823

KENT HALL

THE formal opening of Kent Hall took place on the afternoon of Saturday, October 29, in the presence of officers, alumni and students of the University, and of representatives of the Bench and Bar and of other institutions.

The Chairman of the Board of Trustees, Mr. Rives, announced the completion of the building and presented its keys to the President.

ADDRESS OF MR. RIVES

On behalf of the Board of Trustees, I congratulate the faculties and students, as we congratulate ourselves, upon the completion of this noble and spacious building for the use of the sister schools of Law and Political Science.

It is unnecessary, I am sure, for me to dwell upon the great satisfaction which the Trustees feel at having at last been enabled to carry out their cherished wish, and provide the separate law building, for which there has long been so urgent a demand. Those of us alumni, whose memory goes back to the days when the Law School was housed in the old Colonnade Row in Lafayette Place, and who have followed its fortunes through Great Jones Street into the basement of one library and the garret of another, are well aware of the physical difficulties and limitations under which the work of the Law School and the School of Political Science has heretofore been carried on; and we cannot but rejoice that they have at length an adequate, a commodious and a dignified home.

As to the building, I leave it to speak for itself. We owe its physical perfections to the good taste and experience of the University architects, Messrs. McKim, Mead & White, and of our accomplished consulting engineer, Dean Goetze; and if it falls short of perfection in any respect, that will certainly not be due to any lack of that form of genius which consists in taking infinite pains.

In a larger sense, we owe this building to the wise generosity of three friends of the University, to whom we desire to acknowledge publicly our deep debt of gratitude. Of one of these, who desires to remain anonymous, I am not permitted to speak; but I have the happiness of thanking the President of the Association of the Bar of the City of New York who has acknowledged, by his contribution to the building fund, his indebtedness to the Law School from which he graduated. The third contributor was also an alumnus of the Law School, Mr. Charles Bathgate Beck, who died not long after his graduation and left to this University a share of his very ample fortune. His memory will always be held in remembrance as one of our chief benefactors.

It is also, from another point of view, a very great satisfaction to the Trustees to be able to help on the work of these two schools. I think I speak for every member of the Board when I say that they feel there has been no time, within a generation past, when this nation has had greater need of precisely the training and instruction which these schools are qualified to give. A generation is commonly reckoned at a third of a century; and thirty-three years carries us back to 1877 when the great questions arising out of slavery and the civil war were being finally settled. Since then, new industrial conditions have come into existence, creating a new set of problems which will require for their solution much wisdom and many years of serious effort, and may involve far-reaching changes in our laws and constitution. The numerous rash and even revolutionary panaceas which are constantly suggested are mere symptoms of the extensive social unrest and consequent deep feeling. From these walls will go out the lawyers, judges, legislators, historians, economists and philanthropists of the future; and what is perhaps even more important, the teachers of law and political science who, in hundreds of schools and colleges throughout the land, will instruct thousands and tens of thousands of our future fellow citizens. If this is to remain a government of laws and not of men, it is to our graduates and to men trained like them that the nation must look for the successful solution of the many and difficult problems to which the amazing prosperity of the country has given rise.

It is now my pleasant duty to turn over this building to the care and custody of the President of the University by handing him these keys.

Before doing so, Mr. President, I desire to congratulate you personally upon the completion of this, the sixth building begun and put into use during the less than nine years of your incumbency. The new School of Mines, the Chapel, Hamilton Hall, the two residence buildings—Hartley and Livingston—and now Kent Hall, are in a very real sense the work of your hands. In the past nine years, this University has marvellously prospered. The number of its students has increased by at least a third, and the number of teachers and investigators in an even greater proportion. In our old College we shall have this year the largest Freshman Class on record. If we take into account our regular students alone, the University as a whole is now training over fifty-five hundred young men and women; and if we add those who attend the Summer Session and the Extension Lectures, we are reaching close to eight thousand students. Our material resources in laboratories and libraries have grown as rapidly. Our endowments have increased even faster, and in nine years the University has received the amazing sum of over twelve million dollars in gifts.

We all realize, of course, that great wealth, fine buildings, perfect equipment and large numbers do not make a great university. These things are important chiefly because they can be counted and compared. The things that really matter are those which cannot be measured by any rules of arithmetic, which are impalpable and imponderable, but are none the less real; and if we take them into account, we need fear no comparison with any period in our past. I believe we may fairly say that we have never had a teaching body more learned or more zealous. The spirit of our students has never been higher. And the University has never been of greater service to the community or more esteemed by it.

It is, threfore, with peculiar pleasure that in the name and on behalf of the Trustees I place in your hands the keys of this building in token of your responsibility as President to preserve and protect it and to maintain order and discipline therein; and I do so in the fullest confidence that you will administer the trust alike in the interest of the University we love and the democracy it serves.

President Butler in accepting the building in behalf of the University spoke as follows:

Address of President Butler

Mr. Chairman and Gentlemen:

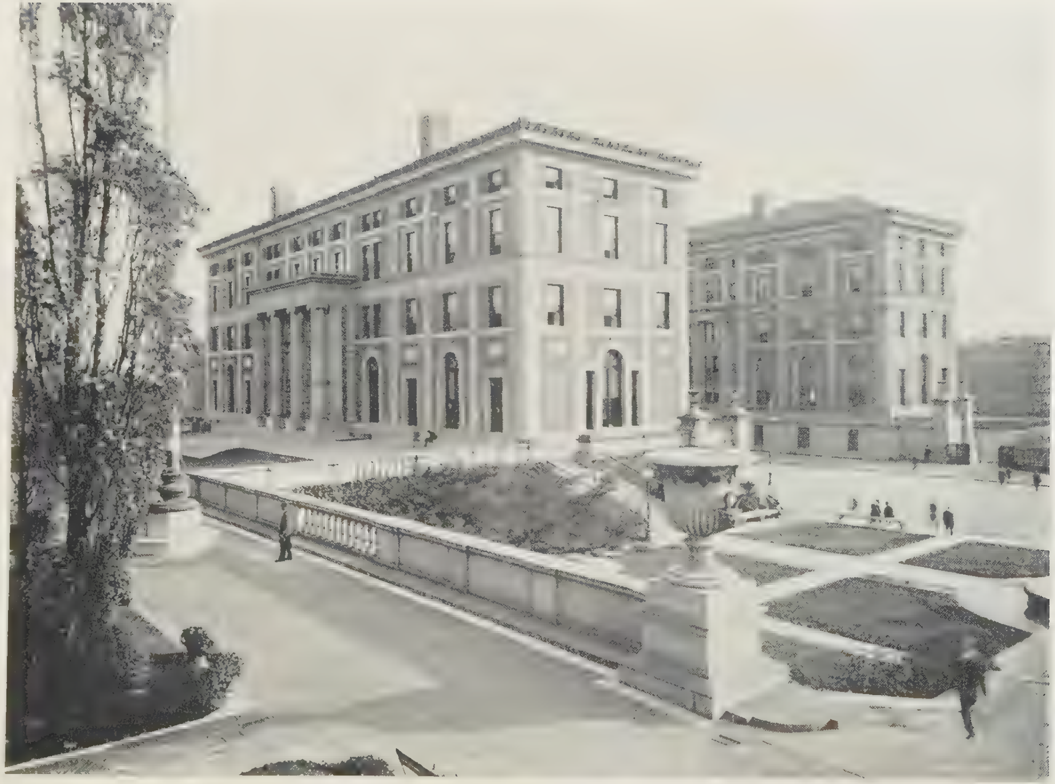
On behalf of my colleagues in the Faculties of Law and Political Science and on behalf of the great company of students who look upon this building as their home, and who through generations to come will, we trust, so look upon it, I accept from your hands, Sir, the symbols of formal occupancy of Kent Hall. For all of my colleagues, I pledge our highest and most serious endeavor to make fitting and abundant use of the great opportunity which this building provides.

The two Schools that come into possession of this home have long been ornaments of our University and of American learning. The Law School from the time of its establishment under the inspiring genius and leadership of Dwight, sprang into a prominence and obtained an influence second to none, I daresay, in the English-speaking world. As the Chairman has pointed out, this Law School until to-day has never had an adequate home or an equipment of the kind which one is accustomed to associate with modern academic endeavor.

The School of Political Science has led the way and set the standard for the highest type of university work that the United States has yet known. In the very year that the Johns Hopkins University was founded, an event from which many are accustomed to date the beginnings of true university work in America, there came into our old College a young idealist who saw visions and who dreamed dreams. He was rich with the ripe scholarship of Europe, and it was under his leadership and in accordance with his plans that our great School of Political Science was called into being. For thirty years this school has drawn upon the foremost economists, historians, and public lawyers of the United States to make its teaching force the best possible. It is a keen pleasure for us all to greet the members of our Faculties of Law and Political Science as they enter to-day into possession of new instruments of usefulness and power.

I like to think of the name which this Hall bears. I like to think, too, that is stands opposite to the building which bears the name of Kent's dear friend, the idol of his youthful political and legal enthusiasms. It is a fine and inspiring thing that these two great American names, those of Hamilton and of Kent,—the two men who, the one at the Bar and the other on the Bench, laid the foundations of American jurisprudence—are so intimately associated with the history of this University. It will mean much to have enduring monuments to these noble names stand here side by side through the generations that are to come.

If it was the genius, the eloquence, and the insight of Hamilton that brought sound philosophy and great historical learning to bear upon the cases and questions of the hour from his place at the Bar, it was the juridical knowledge, the scholarship, the capacity and the analytical skill of Kent which laid the foundations of our national system of jurisprudence from his commanding position upon the Bench. In the splendid history of our American legal system we must ever revere the three great names of Marshall of Virginia, Story of Massachusetts, and Kent of New York as those of the three bright particular stars in the firmament of our jurisprudence. These three men first revealed to the people of the United States the commanding and beneficent place which the courts occupy in our American political system.



KENT HALL

HAMILTON HALL

It was only yesterday that the eloquent junior Senator of the United States from the State of New York made an important political speech in which he stated with precision and with profound wisdom the place of the courts in our American system of government, their function, and the necessity for protecting and preserving their independence and integrity. But I fear that in the enthusiasm of the moment he underestimated the persistence, the malice and the cunning of those who wage war against them. It is one thing to analyze and to discuss in a scientific and judicial spirit the opinion of a great court; it is quite another thing to pour ridicule upon its membership and to bring discredit upon the capacity and intelligence of those who constitute it, in the presence of a shouting mob. The day that Kent Hall ceases to be the home of men who will teach the fundamental principles of our American civil liberty and the necessity for their judicial interpretation and protection, that day let us turn these splendid halls into a morgue. We must be on our guard against the restless and ambitious men who are to-day attacking our courts and who are endeavoring to throw discredit upon them. We may well recall these words written by Kent himself as long ago as 1836:

"We live in a period of uncommon excitement. The spirit of the age is restless, presumptuous and revolutionary. The rapidly increasing appetite for wealth; the inordinate taste for luxury which it engenders; the vehement spirit of speculation and the selfish emulation which it creates; the contempt for slow and moderate gains; the ardent thirst for pleasure and amusement; the diminishing reverence for the wisdom of the past; the disregard of the lessons of experience, the authority of magistrates, and the venerable institutions of ancestral policy—are so many bad symptoms of the diseased state of the public mind."

Let us see to it that Kent Hall stands in its proud place in Columbia University as the seat and center of an instruction which will revere the courts and defend their independence and integrity from every type of political and personal attack.

In concluding the President introduced the Dean of the Law School, Professor Stone.

ADDRESS OF DEAN STONE

Mr. President: I thank you for the personal word but I accept it rather as the representative of my colleagues in the Faculty of Law and as a tribute to them rather than to me personally, as worthy and loyal servants of this University. As a member of the Faculty of Law and on its behalf I desire to express its appreciation of the donation of this beautiful and appropriate building both as a fitting memorial to James Kent, the first Professor of Law in this University, and as a wise and beneficient gift to the cause of legal education. The first Law Lecture in this University was delivered by James Kent in 1794, and the concluding words of that lecture were as follows:

"If he, to whom is intrusted in this seat of learning the cultivation of our laws, can have any effect in elevating the attention of some of our youth from the narrow and selfish objects of the profession, to the nobler study of the principles of our governments, and the policy of our laws; if he can, in any degree, illustrate their reason, their wisdom and their propitious influence on the freedom, order, and happiness of society, and thereby produce a more general interest in their support, he will deem it a happy consolation for his labors."

That language is as appropriate at this day and on this occasion as it was the day it was spoken more than a century ago. It encompasses the whole duty of an instructor in our learned and honorable profession. To impel the student of law to aspire to the practice of it as an honorable profession and not alone as a mere money-making trade; to afford sound legal instruction and maintain high standards of scholarship, and by the influence of our instruction, to inspire respect for our laws and for the agencies which administer them—this, Mr. President, is at once the duty and the privilege of the members of our Faculty, and as well the reward for their labors.

We accept this building, Mr. President, and in accepting it we pledge ourselves to make worthy use of it as an instrument for the performance of that duty and the exercise of that privilege.

Dean Stone then read a letter from the President of the United States in which, after tendering his congratulations upon the completion of Kent Hall he expressed the opinion that one of the great needs of the American bar today is the conviction on the part of every lawyer that the allegiance which he owes to the court and to the Government is higher than that which he owes to his client, and that there is a line beyond which he should not go in selecting the means and method of protecting his client's interest; and urged it as the duty of every law school to teach with more emphasis than ever before the ethics of the profession.

Also a letter from the Hon. Charles E. Hughes, Class of 1884, Justice of the Supreme Court in which, after regretting his inability to be present at the opening of Kent Hall, he said:

> "As an alumnus of the Law School, grateful for the advantages it has afforded and deeply interested in its continued prosperity, it would give me especial pleasure to take part in the exercises on that occasion and personally to congratulate the officers of the University, and particularly all those who are or have been connected with the departments of Law and Political Science, upon this notable provision for increased efficiency. Every thoughtful student of public affairs must appreciate the vast importance of legal education in its relation to the administration of justice under a government of law, and must be solicitous that the pursuit of technical learning shall be attended by every needed facility and shall be dominated by a keen sense of the obligations of citizenship and by an intense desire to make professional equipment an instrumentality of service to the community. This happy event is a reminder of the distinguished work of those who have labored fruitfully in this field, giving instruction and inspiration to generations of students, while at the same time it presages a future activity which, governed by the best traditions of the past, cannot fail to result in a wider range of benefit.
>
> "I rejoice with you in what has been accomplished, in this enlarged opportunity, and in the assurance afforded by the standards and spirit of the Schools of Law and Political Science that they will continue, in ever increasing degree, to serve the high purposes for which they were established."

A letter of congratulation from the Hon. Elihu Root, United States Senator, was also read by the Dean. The President then introduced the Dean of the Faculty of Political Science.

Address of Dean Burgess

Distinguished guests, beloved colleagues and friends all: As we were coming over here a few moments ago the President of this University notified me for the first time that he should call upon me to say a word upon this occasion. He said "Just a single sentence," and I have been wondering ever since that time what that single sentence ought to be. But I have come to the conclusion that it ought to be an expression of gratitude, personally and as the representative of my colleagues, for this magnificent home in which we are now housed. It seems to me, Mr. President, only yesterday when three of us gathered together in a single small room in the

49th Street building with considerable enthusiasm perhaps, but forced by the atmosphere of general cynicism in regard to our School to begin the work of this School with eleven students. To-day, with a Faculty of more than twenty of the most distinguished scholars in history, economics and public law in this country, with a student roll of more than three hundred, housed in this magnificent building, surrounded by these splendid opportunities and with a reputation which is worldwide, I can now say that it has been given to me what is seldom given to human lives, namely, to see the realization of my fondest hopes.

President Butler: It is a matter of no small pride that for some time past, and we hope for some time to come, the Presiding Judges of the two great Courts in this State are sons of Columbia. They have both brought to their high and responsible station the fruits of long experience and wisdom and the benefit of the highest and most independent character. We greet them here to-day as brothers and as friends, as well as great servants of the State; and I present with pleasure his Honor Judge Cullen.

ADDRESS OF HON. EDGAR M. CULLEN, *Class of 1860*

Chief Judge of the Court of Appeals

Mr. President and Gentlemen: It gives me far more than ordinary pleasure to assist on this occasion, not only as a member of the Court of Appeals Bench, but it also gives me great pleasure as the First Vice President of the oldest legal association in the City of New York, the New York Law Institute, to represent it on this occasion. There has been a great advance in the standard of education since I graduated from Columbia fifty years ago, but Columbia has kept pace with the advancing standard.

We meet here to-day to dedicate this building to legal education. I congratulate the Trustees of this great University, to which I owe my own education, on the erection of so noble an edifice. There should have been no difference of opinion as to the name it should bear and, doubtless, there has been none. What name could be bestowed on an edifice erected by Columbia College as a school for law other than that of the great man who was the first Professor of Law in the college; who after those labors were interrupted by service in the courts of the State resumed his duties as an instructor in the law, and whose lectures constitute the greatest legal treatise in America? Of the more than one hundred thousand lawyers in this country it is safe to say that, with the possible exception of Louisiana, where the civil law prevails, not one in a thousand began his legal studies otherwise than by learning Kent's Commentaries. Though more than three-quarters of a century have passed since the last volume of the Commentaries was given to the public, though during that time the growth of the country, the great advance in mechanical arts, the change in the habits and business dealings of our people have caused numerous changes and innovations in the law; though the period has been fertile in the labors of judges and text writers, no attempt has been made to supplant the work or find a substitute for it, and even now Kent's Commentaries remain the great compendium of the law and the foundation of a legal education. Its authority has not been impaired by the lapse of time, and it is still constantly cited in judicial decisions. The judicial career of Chancellor Kent extended over a period of twenty-five years, first as a Justice of the Supreme Court, then as Chief Justice, and finally as Chancellor of the State, which last office he held for nine years, until he reached the age prescribed by the then existing Constitution for retirement from judicial office —sixty years. The judicial work of Chancellor Kent was of the highest order and especially valuable as it was performed during what may be termed the formative period of our jurisprudence, and he made a deep impress both on the substantive law and legal procedure of this State. While there can be no question as to the merit of Chancellor Kent as a Judge, his fame in that realm has been obscured, not on account of any defect in his work, not because his work was subject to contrast with that of still greater Judges, but solely by himself. He has suffered from his own rivalry and his pre-eminent fame as an author has dwarfed his fame as a Judge. But whether as an author or a Judge, as long as the common law remains the basis of our system of jurisprudence, the name Kent will shine as one of the brightest luminaries of the law.

To the students of the Law School I may say that you have every reason to rejoice that you can share in the benefit which systematic instruction in the law affords. That you students will take advantage of the opportunity afforded you by this University I have no doubt. But there is one matter which I wish particularly to impress upon you. Learning alone will not make you great lawyers or great men. In no profession is there such a necessity for character as in that of the law. Your standard of honor and professional integrity should be the highest.

One word to the Faculty of the Law School as to what, I think, may become a serious danger. There has been a great advance in the standard of education since I graduated from this college, fifty years ago. The present tendency is to greatly extend both undergraduate and professional courses, as a result of which men may be unable to enter upon the actual work of their professions until years after they have attained maturity. From this two disadvantages may spring. First, to the student whose professional education can only be obtained by a severe pecuniary struggle; second, a man entering the profession in advanced years is not so pliable either in his habits of thought or conduct as one entering earlier. This is especially true of the law. I mean to retract nothing from what I have said in commendation of systematic professional instruction. On the contrary, I so highly appreciate its benefits that I wish the law schools to be available to the greatest number of students.

ADDRESS OF HON. GEORGE L. INGRAHAM, *Class of 1869*

Presiding Justice of the Appellate Division of the Supreme Court in the first Department, and President of the Law School Alumni Association

Mr. President and Fellow Students of the Law: Whether professors, lawyers, or students we stand here to-day all of us as students of the law. It is with the utmost satisfaction that I look into your faces and take part in this ceremony as representing the Alumni of the Law School. I cannot tell you what a satisfaction it is for me to be present and how much I value the honor that has been done me as representing the Alumni of the Law School, how proud I am of being connected with Columbia University and of the honors it has bestowed upon me.

All who are interested in the future of our profession as well as all those interested in Columbia University and its future must be delighted at to-day's proceedings and the evidence that we see of the advance in importance and usefulness of the Columbia Law School. To one who has been for nearly fifteen years charged with the duty of admitting attorneys and counselors-at-law to practice and with disciplining those members of the profession who have been found false to the trust imposed in them, the necessity of impressing upon students of law during the educational period a realization of the obligations of a lawyer—not only to his clients who entrust their interests to him and to the State which has appointed him to the office that he holds, but also to the profession of which he is a member—has become strikingly apparent. We are daily impressed with the failure of many members of the profession to realize that the position which they hold is one of trust, involving a duty to others rather than one of mere personal advantage. During the period—now almost fifteen years—that I have been a member of the Appellate Division in this Department, the Court has been compelled to disbar or suspend from practice seventy-two attorneys, besides disposing of many other applications in which the offence was not sufficiently serious to justify disbarment, a large proportion of these cases having occurred within the past few years. Many of these members of the profession had been convicted of criminal offences involving the most flagrant abuse of the trust and confidence reposed in them because of the fact that they were members of the profession. The seriousness of this condition is apparent and it is the law schools, by inculcating in the minds of their students the obligations and duties which each lawyer assumes when he becomes a member of the profession, that will be the most important influence in the future. It would be of the utmost importance if there could be a course of lectures devoted to what is known as the ethics of the profession. And so, to one who is approaching the end of his professional career, the hope for the future rests with the continued development and efficiency of the law schools, and, in this State, in the position that Columbia University has taken and will take in the cause of legal education. To those young gentlemen present who are members of the Law School I appeal to aid those of us who are endeavoring to elevate the profession from what is a commercial pursuit to that of a learned and honorable profession, and ask those who have the advantage of such a legal education as Columbia affords to do all in their power to maintain and advance the character of a lawyer.

What I have seen here to-day has suggested a comparison with the period—now over forty years ago—when a small band of young men met day by day in a bare, small room on the second story of an old dwelling house on Lafayette Place, there to receive instruction in the science of the law from one of the greatest of teachers. It was his aim not so much to teach legal rules as to instill into the mind of each of his students a love of the study of the law. What he aimed to do and what he did was to incite a desire to study the great principles of the Common Law of England and to induce a love of that study. There was nothing to make the study of the law attractive except the personality of the professor. No complete and well selected library; no rooms which attracted the student; nothing but a bare room with a few desks and the platform from which the professor addressed his students. But the spirit that was there imbibed by the students and the love of the profession which the teacher instilled into them did more to make his students take the positions that they have taken in the profession and in the country than any other influence which had affected them, and that same spirit, I believe, has characterized Columbia University in its whole subsequent career and its development is the hope for the future.

I can well remember the interest that leading members of the profession then took in the Law School of Columbia College when I was a student. A number of those holding the leading rank in the profession attended at the Law School at the time of our examination for a degree; they followed with much interest the questions that were asked each member of the class; and it was only with their approval that a member of the class was allowed to graduate. This but illustrates the interest that the leaders of the bar took at that time in those who were to succeed them and it would be a great benefit if that interest could be revived. There has been a change in the attitude of the public towards the bar generally which is in many respects unfortunate. I remember when Mr. Charles O'Conor—then by universal consent the leading lawyer of the United States—appeared as counsel for the defendant on the trial of a grandson of Chancellor Walworth for murder. Great interest was taken in that case and in Mr. O'Conor's conduct of the defence. But it was never suggested that by undertaking such defence Mr. O'Conor justified the crime or so identified himself with the defendant as to in any way affect his usefulness to the State or that he thereby lost in the slightest degree the respect and confidence of the whole community in his integrity and disinterestedness. And so through a long list of eminent members of the bar that I could name. It was recognized that every person charged with a crime or other offence was entitled to have counsel appear for and defend him; and a lawyer was not only justified, but it was his duty to render his advice and assistance to everyone seeking him. This now seems to be, in a manner, changed. I am not sure but that the members of the profession are somewhat responsible for this change of the public attitude; but whether that is so or not, the remedy must come from the members of the profession themselves, and this must be by an elevation of the tone of the profession and a more serious appreciation of the duties of a lawyer and the limitation of what it is justifiable for him to do in advancing the interests of his clients. Let us hope that this will come and that this great University will, in the future as in the past, exert all its great influence in that direction.

LAW LIBRARY, KENT HALL

ENTRANCE OF KENT HALL

ADDRESS OF FRANCIS LYNDE STETSON, *Class of 1869*
President of the Association of the Bar of the City of New York

The rolls and the halls of Columbia bear two names which outshine all others in the list of the Bar of the City of New York, Alexander Hamilton the student and James Kent the teacher of the fundamental principles of the noble science to which to-day upon the Areopagus of New York this admirable edifice is dedicated.

For nearly twenty years they were contemporaries at this Bar, but for more than forty years after the tragic termination of Hamilton's meteoric course in 1804 James Kent continued to illuminate and to illustrate the development of the system of American jurisprudence, of which he must be regarded as the founder. His teachings from the judicial bench and from the professional chair absolutely and exclusively dominated the American Bar during the first half of the nineteenth century. In this company to-day may be found many, including the present speaker, who owed to his comparatively recent expositions their earliest apprehension of the principles of law and equity. Competent contemporaneous opinion has gone so far as to declare that even in comparison with the great John Marshall the conclusion is well-nigh inevitable that Kent rightly assumes his place as the first figure in American jurisprudence. Here and now we commemorate him as the most illustrious of the professors of law in America. He was not the first in time for he was preceded by Tapping Reeve and James Gould at Litchfield, but surely he has been unsurpassed in the scope, the accuracy, the lucidity, and the learning of his lectures, which alone among American treatises are recognized by the stately name of Commentaries. It is just and fitting that this venerable institution, adorned and enlarged by his professorship, should thus contribute to the perpetuity of his name and fame. It is no less fitting that the members of the Bar of his own city to which he gave lasting distinction, should participate in the establishment of a worthy home for the Columbia School of Law inspired first by him and later by the luminous and beloved Dwight.

Out of this law school has come a large proportion of the City Bar of this day, including many of those known as its leaders. As one of these graduates I am grateful for this opportunity to make brief public acknowledgment of the debt and the duty that I owe to this venerable institution. The value of a law school course for every student has been indicated by the rules of the Court of Appeals expressly recognizing the completion of such a course as entitled to consideration in admission. The necessity of a law school course for the ordinary student has become correspondingly apparent with the increasing tendency of practicing lawyers to specialize, and consequently to offer to the novitiate in their offices little opportunity there to acquire systematic knowledge of the principles and the precepts of the law as the noblest of sciences. Undoubtedly such a law school course needs to be supplemented by practical experience in the office before the fledgling is qualified to invite and to receive the confidence of clients or to assume the grave responsibility of advising or participating in the actual conduct of their negotiations and controversies. But such advice or participation will be only empirical and consequently meagre without an accurate, systematic and comprehensive knowledge of fundamental principles such as may be gained by the faithful and attentive pursuit of the curriculum of the Columbia College Law School. As observed before the Boston Law School by the late Edward J. Phelps, himself one of the most accomplished and luminous of statesmen and teachers, the lawyer needs breadth, depth and general culture. He must have studied the law as a broad and competent science; he must be able to go down to the foundation principles which underlie all propositions of law; and he must have stored his mind with the culture of fine letters and literature. The ordinary student of to-day will find in the law school better than in the office of the practitioner the spur, the inspiration and the opportunities for the attainment of these noble ends.

The final and supreme advantage of the law school is that its object is study and not commercial gain for the student. Its essential quality is undeviating loyalty to the truth. Here generous youth may develop and nourish that undying devotion to high ideals which despite all modern notions and ridicule must animate and control the thought, the utterance and the activities of all who would command the attention and respect of either the courts or the community. To maintain such ideals for the instruction and elevation of the student not only of his day but for all time was the happy achievement of James Kent. His splendid influence will continue to radiate and through countless generations to illumine those seeking light in this enduring fabric of the Columbia College Law School, and after it shall have passed away, in the monuments of character and learning here moulded by his worthy successors.

ADDRESS OF HON. JOSEPH F. DALY,

Vice-President of the New York County Bar Association.

Representing a Bar Association having the largest membership, if the fewest years, of any in our country, it gives me great pleasure to assist to-day at the honor paid an historic personality in the ranks of jurists in our State. The name of Kent recalls all the veneration felt by the student at the outset of his career for the law and its ministers on the Bench and at the Bar—a feeling which it is our interest to see increase as experience widens. This occasion is useful indeed to the whole community if it needs a reminder of the profound respect due to the institutions of our country—institutions of which Kent was so able an exponent. He wrote at a time when the ideas of a new generation were working to throw off many of the shackles imposed by an older civilization. The making and the change of laws is by processes imbedded in the principles of our Government and these principles are sacred. This is a nation of constitutions as well as of laws.

Foremost in upholding as well as interpreting the principles of those institutions was Kent, the accomplished practitioner, the able justice of the Supreme Court, and afterwards Chancellor, the famous teacher and—what must not be forgotten—a man of public affairs, and an active, resourceful, keen and vigorous political leader. These halls are destined to send forth many lawyers and many judges. The doctrines taught under not the shadow, but rather let us say the sunshine of a mighty name will be potent and enduring for good.

An inspection of the building followed the addresses.

The building is 200 feet long and 55 feet wide, and is four stories in height above the basement. The law library occupies the entire first floor, and is not only admirably adapted for its purpose, but has great architectural dignity. Massive oak columns support a vaulted ceiling which extends the length of the room, with transverse vaults over the alcoves. The lofty windows on all sides afford abundant light, and the alcoves offer attractive and convenient space for readers. The book shelves have a capacity for twenty-five thousand volumes, immediately accessible to readers, and in the basement under the space occupied by the librarian's desk are book stacks which will have a capacity for eighty thousand volumes, which can be increased if necessary. The second floor will be occupied by the offices of the Dean of the Law School and of the law professors, and lecture rooms, the latter having a seating capacity of from 50 to 250. The third and fourth floors will be occupied by the Faculty of Political Science for offices, lecture rooms, seminar rooms, and an historical reading room and library. The lecture rooms will have a total seating capacity of 750. In the well lighted basement will be provided a large social room for the use of the students, furnished as a club room, offices for the *Law Review,* and rooms for Moot Courts.

The funds for the building have been provided by gift and bequest, the largest single amount coming from Charles Bathgate Beck, a graduate of the College, class of '77, Law School, class of '79, who left to the University property which has realized about $350,000.

HUXLEY ON EDUCATION*

> "The stars come nightly to the sky;
> The tidal wave comes to the sea;
> Nor time, nor space, nor deep, nor high
> Can keep my own away from me."
>
> —BURROUGHS.

THE most sanguine day of the college year is the opening one: the student has not yet faced the impossible task annually presented of embracing the modern world of knowledge; his errors and failures of earlier years are forgotten; he faces the coming months full of new hope.

How would my old master, Huxley, address you if he were to find you in this felicitous frame of mind, sharpening your wits and your pencils for the contest which will begin to-morrow morning in every hall and laboratory of this great University? May I speak for him as I heard him during the winter of 1879–80 from his lecture desk and as he kindly in conversation gave me of his stores of wisdom and experience? May I add from his forceful essays entitled "Science and Education," delivered between 1874 and 1887? May I contribute also from my own thirty-seven years of life as a student and teacher, beginning in 1873 and reaching a turning point in 1910 when Columbia enrolled me among its research professors? It was Huxley's life, his example, the tone of his writings rather than his actual precepts which most influenced me, for in 1879 he was so intensely absorbed in public work and administration, as well as in research and teaching, that little opportunity remained for laboratory conferences with his students. How I happened to go to him was as follows:

Unlucky—as they appeared to me at the time, but lucky as I look back upon them—were my own early flounderings and blunderings in seeking the true method of education. Huxley has observed of his "Voyage of the Rattlesnake" that it is a good thing to get down to the bare bones of existence. The same is true of self-education. As compared with the hosts of to-day, few men in 1877 knew how to guide the graduate youth: the Johns Hopkins was still nascent; the creative force of Louis Agassiz had spent itself in producing the first school of naturalists, including the genius William James. One learned one's errors through falling into pitfalls. With two companions I was guided by a sort of blind instinct to feel that the most important thing in life was to make a discovery of some kind. On consulting one of our most forceful and genial professors his advice was negative and discouraging: "Young men," he said, "go on with your studies for ten or twelve years until you have covered the whole subject; you will then be ready for research of your own." There appeared to be something wrong about this although we did not know exactly what. We disregarded the advice, left the laboratory of this professor, and at the end of the year did succeed in writing a paper which subsequently attracted the attention of Huxley and was the indirect means of an introduction to Darwin. It was a lame product, but it was ours, and in looking back upon it, one feels with Touchstone in his comment upon Audrey:

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* Address delivered especially to the undergraduate students at the opening exercises of the 157th academic year, September 28, 1910.

"A poor virgin, Sir,
An ill favored thing, Sir,
But mine own."

I shall present in this brief address only one idea, namely, the lesson of Huxley's life and the result of my own experience is that *productive thinking* is the chief *means* as well as the chief *end* of education, and that the natural evolution of education will be to develop this kind of thinking earlier and earlier in the life of the student.

One of the most marvelous of the manifold laws of evolution is what is called *"acceleration."* By this law the beginning of an important organ like the eye of the chick, for example, is thrust forward into a very early stage of embryonic development. This is, first, because the eye is a very complex organ and needs a long time for development, and second because the fully formed eye of most animals is needed immediately at birth. I predict that the analogy in the evolution of education will be very close. Productive thinking may be compared to the eye; it is needed by the student the moment he graduates, or is hatched, so to speak; it is now developed only in the graduate schools; it is such an integral and essential part of education that the spirit of it is destined to be "accelerated," or thrust forward into the opening and preparatory years.

If the lines of one's life were to be cast afresh, if by some metempsychosis one were moulded into what is known as a "great educator," a man of conventions and platforms, and were suddenly to become more or less responsible for 3,000 minds and souls, productive thinking, or the "centrifugal method" of teaching would not be postponed to graduation or thereafter, but would begin with the Freshman, yes, among these humble men of low estate! It may be *apropos* to recall a story told of President McCosh of Princeton, a man who inspired all his students to production and enlivened them with a constant flow of humor. On one occasion he invited his predecessor, ex-President McLean, to offer prayers in the College Chapel. Dr. McLean's prayer was at once all embracing and reminiscent; it descended from the foreign powers to the heads of the United States government, to the State of New Jersey, through the Trustees, the Faculty, and, in a perfectly logical manner, finally reached the entering class. This naturally raised a great disturbance among the Sophomores, who were evidently jealous of the divine blessing. The disturbance brought the prayer to an abrupt close, and Dr. McCosh was heard to remark: "I should think that Dr. McLean would have more sense than to pray for the Freshmen."

As regards the raw material into which "productive thinking" is to be instilled, I am an optimist. I do not belong to the "despair school" of educators, and have no sympathy with the army of editorial writers and prigs who are depreciating the American student. The chief trouble lies not with our youth, nor with our schools, but with our adults. How can springs rise higher than their sources? On the whole, you students are very much above the average American. You are not driven to these doors; certainly in these days of youthful freedom and choice you came of your own free will. The very fact of your coming raises you above the general level, and while you are here you will be living in a world of ideas,—the only kind of a world at all worth living in. You are temporarily cut off more or less from the world of dollars and cents, shillings and pence. Here Huxley helps you in extolling the sheer sense of joy in thinking truer and straighter than others, a kind of superiority which does not mean conceit, the possession of something which is denied the man in the street. You redound with original impulses and creative energy, which must find expression somehow or somewhere; if not under the prevailing incurrent, or "centripetal system" of academic instruction, it must let itself out in extra-academic activities, in your sports, your societies, your committees, your organizations, your dramatics, all good things and having the highest educational value in so far as they represent your output, your outflow, your centrifugal force.

You are, in fact, in a contest with your intellectual environment outside of these walls. Morally, according to Ferrero, politically, according to Bryce, and economically, according to Carnegie, you are in the midst of a "triumphant democracy." But in the world of ideas such as sways Italy, Germany, England, and in the highest degree France, you are in the midst of a "triumphant mediocrity." Paris is a city where "ideas" are at a premium and money values count for very little in public estimation. The whole public waits breathless upon the production of "Chanticleer." That Walhalla of French ambition, "la Gloire," may be reached by men of ideas, but not by men of the marts. Is it conceivable that the police of New York should assemble to fight a mob gathered to break up the opera of a certain composer? Is it conceivable that you students should crowd into this theatre to prevent a speaker being heard, as those of the Sorbonne did some years ago in the case of Brunetière? If you should, no one in this city would understand you, and the police would be called on promptly to interfere.

A fair measure of the culture of your environment is the depth to which your morning paper prostitutes itself for the dollar, its shades of yellowness, its frivolity or its unscrupulousness, or both. I sometimes think it would be better not to read the newspapers at all, even when they are conscientious, because of their lack of a sense of proportion, in the news columns at least, of the really important things in American life. Our most serious evening mentor of student manners and morals gives six columns to a football game and six lines to a great intercollegiate debate. Such is the difference between precept and practice. American laurels are for the giant captain of industry; when his life is threatened or taken away acres of beautiful forest are cut down to procure the paper pulp necessary to set forth his achievements, while our greatest astronomer and mathematician passes away and perhaps the pulp of a single tree will suffice for the brief, inconspicuous paragraphs which record his illness and death.

Your British cousin is in a far more favorable atmosphere, beginning with his morning paper and ending with the conversation of his seniors over the evening cigar. As a Cambridge man, having spent two years in London and the university, I would not describe the life so much as serious as *worth while*. There are humor, and the pleasures of life in abundance, but what is done, is done thoroughly well. Contrast the comments of the British and American press on such a light subject as international polo; the former alone are well worth reading, written by experts and adding something to our knowledge of the game. In the more novel subject of aviation we look in vain in our press for any solid information about construction. Or take the practical subject of politics; the British student finds every great speech delivered in every part of the Empire published in full in his morning paper; as an elector he gets his evidence at first hand instead of through the medium of the editor.

I believe the greatest fault of the American student lies in the over-development of one of his greatest virtues, namely, his collectivism. His strong *esprit de corps* patterns and moulds him too far. The rewards are for the "lock-step" type of man who conforms to the prevailing ideals of his college. He must parade, he must cheer, to order. Individualism is at a discount; it debars a man from the social rewards of college life. In my last address to Columbia students on the life of Darwin,* I asked what would be thought of that peculiar, ungainly, beetle collector if he were to enter one of our colleges to-day? He would be lampooned and laughed out of the exercise of his preferences and predispositions. The mother of a very talented young honor man recently confessed to me that she never spoke of her son's rank because she found it was considered "queer." This is not what young America generates, but what it borrows or reflects from the environment of its elders.

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* Life and Works of Darwin, *Pop. Sci. Monthly,* April, 1909, pp. 315–340 (address delivered at Columbia University on the one hundredth anniversary of Darwin's birth, as the first of a series of nine lectures on "Charles Darwin and His Influence on Science").

Thus the young American is not lifted up by the example of his seniors, he has to lift it up. If he is a student and has serious ambitions he represents the young salt of his nation, and the college fraternity in general is a light shining in the darkness. Thus stumbling, groping, often misled by his natural leaders, he does somehow or other, through sheer force, acquire an education, and is just as surely coming to the front in the leadership of the American nation as the Oxford or Cambridge man is leading the British nation.

Our student body is as fine as can be, it represents the best blood and the best impulses of the country; but there may be something wrong, some loss, some delay, some misdirection of educational energy.

Bad as the British university system may be, and it has been vastly improved by the influence of Huxley, it is more effective than ours because more centrifugal. English lads are taught to compose, even to speak in Latin and Greek. The Greek play is an anomaly here, it is an annual affair at Cambridge. There are not one but many active and successful debating clubs in Cambridge.

The faults with our educational design are to be discovered through study of the lives of great men and through one's own hard and stony experience. The best text-books for the nurture of the mind are these very lives, and they are not found in the lists of the pedagogues. Consult your Froebel, if you will, but follow the actual steps to Parnassus of the men whose political, literary, scientific, or professional career you expect to follow. If you would be a missionary, take the lives of Patterson and Livingston; if an engineer "The Lives of Engineers"; if a physician, study Pasteur, which I consider by far the noblest scientific life of the twentieth century; if you would be a man of science, study the recently published lives and letters of Darwin, Spencer, Kelvin, and of our prototype Huxley.

Here you may discover the secret of greatness, which is, first, to be born great, unfortunately a difficult and often impossible task; second, to possess the *instinct of self-education.* You will find that everyone of these masters while more or less influenced by their tutors and governors were led far more by a sort of internal, instinctive feeling that they must do certain things and learn certain things. They may fight the battle royal with parents, teachers, and professors, they may be as rebellious as ducklings amidst broods of chickens and give as much concern to the mother fowls, but without exception from a very early age they do their own thinking and revolt against having it done for them, and they seek their own mode of learning. The boy Kelvin is taken to Germany by his father to study the mathematics of Kelland; he slips down into the cellar to the French of Fourier, and at the age of fifteen publishes his first paper to demonstrate that Fourier is right and Kelland is wrong. Pasteur's first research in crystallography is so brilliant that his professor urges him to devote himself to this branch of science, but Pasteur insists upon continuing for five years longer his general studies in chemistry and physics.

This is the true empirical, or laboratory method of getting at the trouble, if trouble there be in the American *modus operandi;* but a generation of our great educators have gone into the question as if no experiments had ever been made. In the last thirty years one has seen rise up a series of "healers," trying to locate the supposed weakness in the American student: one finds it in the classic tongues and substitutes the modern; one in the required system and substitutes the elective; one in the lack of contact between teacher and student and brings in preceptors, under whom the patient shows a slight improvement Now the kind of diagnosis which comes from examining such a life as that of Huxley shows that the real trouble lies in the prolongation to mature years of what may be styled the "centripetal system," namely, that afferent, or inflowing, mediæval and oriental kind of instruction in which the student is rarely if ever forced to do his own thinking.

You will perceive by this that I am altogether on your side, an insurgent in education, altogether against most of my profession, altogether in sympathy with the over-fed student, and altogether against the prevailing system of overfeeding, which stuffs, crams, pours in, spoon-feeds, and as a sort of deathbed repentance institutes creative work after graduation.

How do you yourself stand on this question? Is your idea of a good student that of a good "receptacle"? Do you regard your instructors as useful grain hoppers whose duty it is to gather kernels of wisdom from all sources and direct them into your receptive minds? Are you content to be a sort of psychic *Sacculina,* a vegetative animal, your mind a vast sack with two systems, one for the incurrent, the other for the outcurrent of predigested ideas? If so, all your mental organs of combat and locomotion will atrophy. Do you put your faith in reading or in book knowledge? If so, you should know that not a five foot shelf of books, not even the ardent reading of a fifty foot shelf aided by prodigious memory will give you that enviable thing called culture, because the yard stick of this precious quality is not what you take in but what you give out, and this from the subtle chemistry of your brain must have passed through a mental metabolism of your own so that you have lent something to it. To be a man of culture you need not be a man of creative power, because such men are few, they are born not made; but you must be a man of some degree of centrifugal force, of individuality, of critical opinion, who must make over what is read into conversation and into life. Yes, one little idea of your own well expressed has a greater cultural value than one hundred ideas you absorb; one page that you produce, finely written, new to science or to letters and really worth reading outweighs for your own purposes the five foot shelf. On graduation, *presto,* all changes, then of necessity must your life be independent and centrifugal; and just in so far as it has these powers will it be successful; just in so far as it is merely imitative will it be a failure.

There is no revolution in the contrary, or efferent, design. Like all else in the world of thought it is in the germ at least as old as the Greeks and its illustrious pioneer was Socrates (469–399 B. C.), who led the approach to truth not by laying down the law himself but by means of answers required of his students. The outflowing or efferent principle, moreover, is in the program of Perry and many other reformers to-day.

Against the centripetal theory of acquiring culture Huxley revolted with all his might. His daily practice in the centrifugal school was in the genesis of opinion; and he incessantly practiced the precept that forming one's own opinion is infinitely better than borrowing one. Our sophisticated age discourages originality of view because of the plenitude of a ready-made supply of editorials, of reviews, of reviews of reviews, of critiques, comments, translations and cribs. Study political speeches, not editorials about them; read original debates, speeches, and reports. If you purpose to be a naturalist get as soon as you can at the objects themselves; if you would be an artist, go to your models; if a writer, on the same principle take your authors at first hand, and, after you have wrestled with the texts and reached the full length of your own fathom line, then take the fathom line of the critic and reviewer. Do not trust to mental peptones. Carry the independent, inquisitive, skeptical and even rebellious spirit of the graduate school well down into undergraduate life, and even into school life. If you are a student force yourself to think independently; if a teacher compel your youth to express their own minds. In listening to a lecture weigh the evidence as presented, cultivate a polite skepticism, not affected but genuine, keep a running fire of interrogation marks in your mind, and you will finally develop a mind of your own. Do not climb that mountain of learning in the hope that when you reach the summit you will be able to think for yourself; think for yourself while you are climbing.

In studying the lives of your great men you will find certain of them were veritable storehouses of facts, but Darwin, the greatest of them all in the last century, depended largely upon his inveterate and voluminous powers of note-taking. Thus you may pray for the daily bread of real mental growth, for the future paradise is a state of mind and not a state of memory. The line of thought is the line of greatest resistance; the line of memory is the line of least resistance; in itself it is purely imitative, like the gold or silver electro-plating process which lends a superficial coating of brilliancy or polish to what may be a shallow mind.

The case is deliberately overstated to give it emphasis.

True, the accumulated knowledge of what has been thought and said serves as the gravity law which will keep you from flying off at a tangent. But no warning signals are needed, there is not the least danger that constructive thinking will drive you away from learning, it will much more surely drive you to it, with a deeply intensified reverence for your intellectual forebears; in fact, the eldest offspring of centrifugal education is that keen and fresh appetite for knowledge which springs only from trying to add your own mite to it. How your Maxwell, Herz, Röntgen, Curie, with their world-invigorating discoveries among the laws of radiant matter begin to soar in your estimation when you yourself wrest one single new fact from the reluctant world of atoms! How your modern poets, Maeterlinck and Rostand, take on the air of inspiration when you would add a line of prose verse to what they are delving for in this mysterious human faculty of ours. Regard Voltaire at the age of ten in "St. Louis Le Grand," the Eton of France, already producing bad verses, but with a passionate voracity for poetry and the drama. Regard the youthful Huxley returning from his voyage of the "Rattlesnake" and laying out for himself a ten year's course in search of pure information.

This route of your own to opinions, ideas, and the discovery of new facts or principles brings you back again to Huxley as the man who always had something of his own to say and labored to say it in such a way as to force people to listen to him. His wondrous style did not come easily to him; he himself told me it cost him years of effort, and I consider his advice about style far wiser than that of Herbert Spencer. Why forego pleasures, turn your back on the world, the flesh, and the devil, and devote your life to erudition, observation, and the pen if you remain unimpressive, if you cannot get an audience, if no one cares to read what you write? This moral is one of the first that Huxley has impressed upon you, namely, *write to be read;* if necessary "stoop to conquer," employ all your arts and wiles to get an audience in science, in literature, in the arts, in politics. Get an audience you must, otherwise you will be a cipher instead of a force.

Pursuant of the constructive design the measure of the teacher's success is the degree in which ideas come not from him but from his pupils. A brilliant address may produce a temporary emotion of admiration, a dry lecture may produce a permanent productive impulse in the hearers. One may compare some who are popularly known as gifted teachers to expert swimmers who sit on the bank and talk inspiringly on analyses of strokes; the centrifugal teacher takes the pupils into the water with him, he may even pretend to drown and call for a rescue. In football parlance, the coach must get into the scrimmage with the team. This was the lesson taught me by the great embryologist Francis Balfour of Cambridge, who was singularly noted for doing joint papers with his men. An experiment I have tried with great success in order to cultivate centrifugal power and expression at the same time is to get out of the lecture chair and make my students in turn lecture to me. This is virtually the famous method of teaching law re-discovered by the educational genius of Langdell; the students do all the lecturing and discoursing, the professor lolls quietly in his chair and makes his comments; the stimulus upon ambition and competition is fairly magical; there is in the classroom the real intellectual struggle for existence which one meets in the world of affairs. I would apply this very Socratic principle in every branch of instruction, early and late, and thus obey the "acceleration" law in education which I have spoken of above as bringing into earlier and earlier stages those powers which are to be actually of service in after life.

There is then no mystery about education if we plan it along the actual lines of self-development followed by these great leaders and shape its deep undercurrent principles after our own needs and experience. Look early at the desired goal and work toward it from the very beginning. The proof that the secret does not lie in subject, or language, but in preparation for the living productive principle is found in the fact that there have been *relatively* educated men in every stage of history. The wall painters in the Magdalenian caves were the producers and hence the educated men of their day. This goal of production was sought even earlier by the leaders of Eolithic men 200,000 years ago and is equally magnetic for the men of dirigible balloons and aeroplanes of our day. It is, to follow in mind-culture the principle of addition and accretion characteristic of all living things, namely, to develop the highest degree of productive power, centrifugal force, original, creative, individual efficiency. Through this the world advances; the Neolithic man with his invention of polished implements succeeds the Palæolithic, and the man of books and printing replaces the savage.

The standards of a liberal mind are and always have been the same, namely, the sense of Truth and Beauty, both of which are again in conformity with Nature.

"Beauty is truth, truth beauty, that is all
Ye know on earth, and all ye need to know."
—KEAT'S *Ode on a Grecian Urn*

The sources of our facts are and always have been the same, namely, the learning of what men before you have observed and recorded, and the advance only through the observation of new truth, that is, old to nature but new to man. The handling of this knowledge has always been the same, namely, through human reason. The giving forth of this knowledge and thus the furthering of ideas and customs has and always will be the same, namely, through expression, vocal, written, or manual, that is, in symbols and in design.

It follows that the all round liberally educated man, from Palæolithic times to the time when the earth shall become a cold cinder, will always be the same, namely, the man who follows his standards of truth and beauty, who employs his learning and observation, his reason, his expression, for purposes of production, that is, to add something of his own to the stock of the world's ideas.

One cannot too often quote the rugged insistence of Carlyle: "Produce! Produce! Were it but the pitifullest infinitesimal fraction of a product, produce it in God's name! 'Tis the utmost thou hast in thee: out with it, then."

Now note that whereas there are these six senses and powers of mind which subserve the seventh, namely, the power of constructive thinking, and whereas the giving out of ideas is the object to be attained, only one power figures prominently in our modern system of college and school education, namely, the learning of fact and the memory thereof. It is no exaggeration to say that this makes up 95 per cent. of modern education. Who are the meteors of school and college days? For the most part those with precocious or well trained memories. Why do so many of these meteors flash out of existence at graduation? The answer is simple if you accept my conception of education. Whereas it takes six powers to make a liberally educated man or woman, and seven to make a productive man or woman, only one power has been cultivated assiduously in the 'centripetal' education; whereas there are two great gateways of knowledge, learning and observation, only one has been continuously passed through; whereas there are two universal standards of truth and beauty, only truth has constantly been held up to you, and that in precept rather than in practice. For nothing is surer than this, that the sense of truth must come as a daily personal experience in the life of the student through testing values for himself, as it does in the life of the scientist, the artist, the physician, the engineer, the merchant. Note that whereas you are powerless unless you can by the metabolism of logic make the sum of acquired and observed knowledge your own, that kind of work-a-day efficient logic has never been forced upon you and you are daily, perhaps hourly, guilty of the *non sequitur,* the *post hoc ergo propter hoc,* the undistributed middle, and all those innocent sins against truth which come through the illogical mind.

"That man," says Huxley, "has had a liberal education . . . whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind."

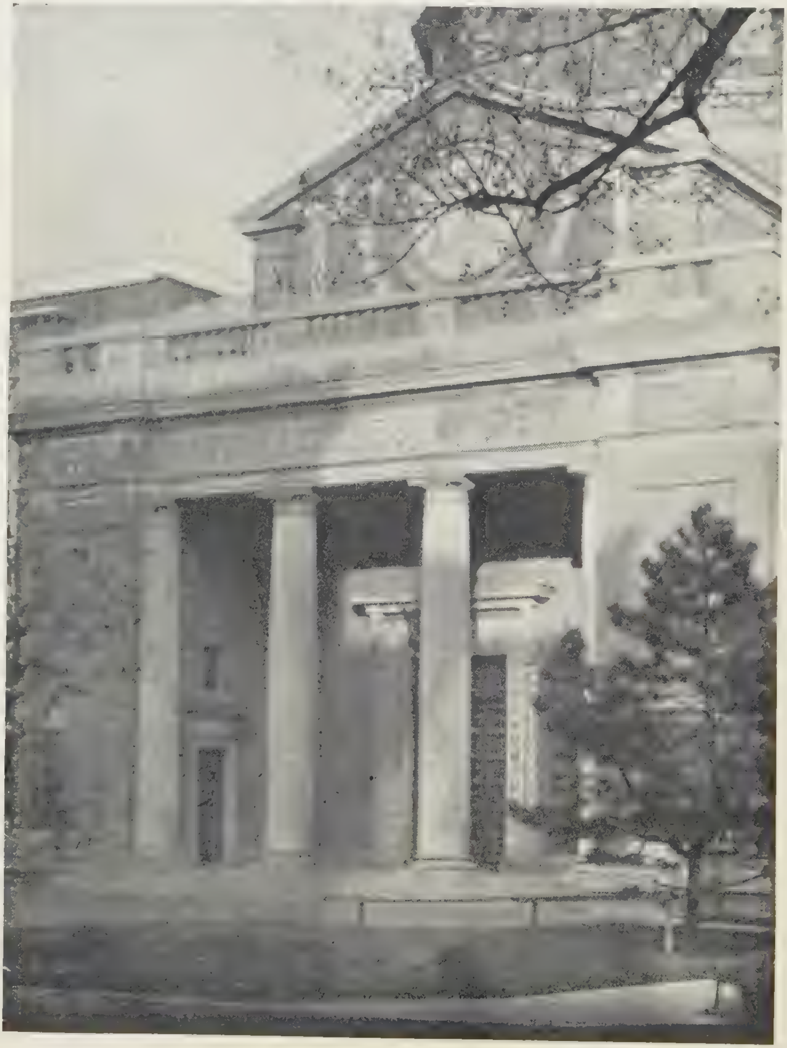
Note that whereas you are a useless member of society unless you can give forth something of what you know and feel in writing speaking, or design, your expressive powers may have been atrophied through insufficient use. In brief, you may have shunned individual opinion, observation, logic, expression, because they are each and every one on the lines of greatest resistance. And your teachers not only allowed you but actually encouraged and rewarded you for following the lines of least resistance in the accurate reproduction, in examination papers and marking systems, of their ideas and those you found in books.

May you, therefore, write down these seven words and read them over every morning: Truth, Beauty, Learning, Observation, Logic, Expression, Production. In the wondrous old quilt work of inherited or ancestral predispositions which make your being you may be gifted with all these seven powers in equal and well balanced degree; if you are so blessed you have a great career before you. If, as is more likely, you have in full measure only a part of each, or some in large measure, some in small, keep on the daily examination of your chart as giving you the canons of a liberal education and of a productive mind.

Remember that as regards the somewhat overworked word "service" every addition in every conceivable department of human activity which is constructive of society is service; that the spirit of science is to transfer something of value from the unknown into the realm of the known, and is, therefore, identical with the spirit of literature; that the moral test of every advance is whether or not it is constructive, for whatever is constructive is moral.

I would not for a moment take advantage of the present opportunity to discourage the study of human nature and of the humanities, but for what is called the best opening for a constructive career give me Nature. The ground for my preference is that human nature is an exhaustible fountain of research; Homer understood it well, Solomon fathomed it; Shakespeare divined it, both normal and abnormal; the modernists have been squeezing out the last drops of abnormality. Nature, studied since Aristotle's time, is still full to the brim; no perceptible falling of its tides is evident from any point at which it is attacked, from nebulæ to protoplasm, it is always wholesome, refreshing, and invigorating. Of the two most creative literary artists of our time, Maeterlinck, jaded with human abnormality, comes back to the bee and the flowers and the "blue bird," with a delicious renewal of youth, while Rostand turns to the barnyard.

HENRY FAIRFIELD OSBORN



Amy Whittemore

ST. PAUL'S CHAPEL

THE STUDY OF PHILOSOPHY

ARISTOTLE said of philosophy that other sciences are more useful, but none is so excellent. The comment is worth remembering in any consideration of the claims of philosophy upon a student's time, for it is doubtless true that philosophy is to be commended primarily on account of its excellence, that is on account of the value it may have as an intellectual possession. Its usefulness—and usefulness is not to be denied it—is an effect of its excellence rather than a cause. Thus it may be, as Novalis affirmed, that philosophy bakes no bread, and yet it may be desirable for bakers to have a philosophy. Or, to put the truth in general terms, if philosophy does not lead directly to the discovery of ways and means by which the conditions of living may be improved, and if it does not of itself afford the prospect of gainful occupations, its possession may still be of considerable value because of the good it does to one's disposition.

In my own experience, I have found that the student who takes up the study seriously, usually expects to find in philosophy some solution of what we are wont to call the riddles of existence. He does not expect to make any notable discovery or any great contribution to knowledge. He does expect, however, that the problems of life will be straightened out. He looks for some helpful solution of them in a comprehensive view of things which can be justified. Opinions about the meaning of life, the origin and destiny of man, the claims of morality and religion, the proper pursuit of happiness, have ceased to be for him opinions which he can accept solely because he has been accustomed to them. They provoke his criticism and reflection. He would have his actions and his views of life justified by thought rather than by habit. He would be able to give a reason for the faith that is in him; or, if a satisfying faith can not be found, he would know the stern truth. So he turns to philosophy, because it professes to be the endeavor to make our knowledge contribute as a whole to a clearer vision of the kind of world in which we live, our place in it, and the opportunities, obligations, and prospects our place in it affords.

Because philosophy professes to be such an endeavor, one is justified in expecting much from it. Furthermore, the primary claim which philosophy makes for one's consideration is precisely the prospect of that clearer vision of things. Therein its excellence is discovered. Yet to promise that philosophy is adequate to solve the problems of life is to promise too much, and to mistake endeavor for accomplishment. The study of philosophy is indeed apt to raise more questions than it answers and to provoke more problems than it solves. It ends in uncertainty as often as it ends in certainty. Consequently he who looks to philosophy for salvation, should be warned rather than encouraged. It is, therefore, better to rest the claims of philosophy upon what one, with industry, may confidently expect, rather than upon a promise the fulfillment of which is very doubtful.

A philosophy so complete that it will need no revision may be impossible. Even the hope of such a philosophy may be extravagant. Yet men, and men of extraordinary ability, have repeatedly attempted it. With these attempts it is worth while to become familiar. Indeed, I would affirm that it is a misfortune not to be familiar with them. If their value were only esthetic, revealing to us a certain industry of the imagination, they would be ranked high among the works of man's art. Plato's dialogues, for example, are not only essays in philosophy, but they are also genuine dramas where ideas and opinions, instead of persons, are the characters. The play of these ideas and opinions is delightful to behold. In this respect the dialogues of Plato are admittedly unsurpassed and rank among the most significant achievements in literature. In them one may discover the comic and the tragic possibilities of the life of thought. To be unfamiliar with them is like being unfamiliar with the best in music or the best in painting. And what is true of Plato is true also of other great philosophers. Spencer, for instance, lacked all the literary graces Plato possessed, lacked his sense of humor and his feeling for play, lacked, too, his insight and his instinct for the profound, yet the reading of Spencer has turned many a reader into an enthusiastic admirer. It has done this not because what Spencer says contains an overmastering truth, but because the way he weaves together ideas taken from all the departments of knowledge into a world picture captivates the imagination after the manner of every great work of art.

Indeed, so pronounced is this esthetic quality in the works of all the great philosophers that I am sure we should treasure them even if we were quite convinced that they were scientifically futile and valueless. One reason why they are not more generally esteemed is because we are wont to judge them for the truth they contain, and not finding truth perhaps, we miss their beauty. It is good counsel, therefore, to advise that they be comprehended as products of the imagination before the attempt is made to appraise their scientific worth. Let any one study Spinoza, not caring whether what he says is true or false, caring only to know what ideas possessed his mind and how they operated there, leading him to envisage the world as "in God and without God not to be or be conceived," and one will rank the study of Spinoza among the significant experiences of life. It is important to have beheld a great vision.

The study of philosophy affords the student, thus, acquaintance with important masterpieces of the imagination. They are important, moreover, not only because they can provide a genuinely esthetic experience, but also because in them the dominating ideas of periods of history and of nationalities are often reflected or forecasted. Plato, as I have said, is the great dramatist of ideas. These ideas may be separated from their historic setting and be contemplated in the impressive dramatic unity which Plato's genius gives them. Yet Plato found his ideas in the turmoil of Athenian life. In his dialogues, the city sits enthroned, the perfect city, looking at which Athenians may see the actual Athens in the twofold light of what they ought to know and what they do. He would arouse Athenian life to a vitalized consciousness and criticism of itself. Plato's philosophy is, accordingly, not only a theory of the world or a work of art, it is also a document in Greek history. Without it that history is imperfectly understood. He may have influenced his own time but little and indirectly, but he has given us a picture of its moral, political, and intellectual life by means of vivid descriptions at times, but, more significantly, by exhibiting it in the light of the interrelation and systematization of its current ideas. Similarly, modern philosophy is, in large measure, modern life systematized in terms of its current ideas. And if modern philosophers, with less imagination than Plato, have tried to evolve these ideas out of the mind of man or out of man's relation to his surroundings, instead of putting them into a kind of Olympic heaven to fascinate man by their immortality, the contrast is precisely typical of the point I would emphasize, namely, that philosophy affords an insight into the spirit of historical periods as well as professes to be a theory of the universe.

Furthermore, philosophy sometimes dominates an age, giving to methods and ideals their characteristic qualities. For a great and apparently successful generalization becomes a pattern to follow. We have seen this in our own day in the wide-spread acceptance of the idea of evolution. The success of Darwin has been not only an impulse to biology, but it has also led to the application of evolutionary ideas to almost every human interest. I suppose that there is no other general conception so current to-day as that which represents the world as a whole and all human institutions—society, the state, the family, religion, morals, art, industry, intelligence—as growing from simple beginnings to more complex stages through an inevitable struggle for permanence. Such a conception, when made so comprehensive, is confined no longer to any one science or group of sciences, but has become a philosophy controlling both inquiry and conduct. The study of it can hardly fail to be of consequence for any one interested in current theory and practice.

I have indicated several advantages to be expected from the study of philosophy which are quite independent of the consideration whether philosophy is scientifically valuable as a theory of the universe. With regard to this broader question of its scientific value there are differences of opinion. Because there seems to be no generally accepted philosophy among philosophers in the sense in which there is a generally accepted physics among physicists, because there appears to be no established direction of philosophical inquiry to which individual efforts add steady accumulation, because philosophy is so speculative and individual philosophers differ so radically among themselves, many have concluded that philosophy should not be taken seriously as a department of knowledge. Personally, I take it seriously, but I recognize that a confession of faith is not proof of a sound faith, and I acknowledge that the scientific character of philosophy can be established only as philosophy achieves results which have recognized scientific value. How far it may have already succeeded, I leave an open question here, for I think it is more important in considering the prospect which the study of philosophy affords, to speak of unquestionable advantages. Evidently the study should not be undertaken with the expectation that it affords a shorter or an easier road to a knowledge of the world than other studies, or that it will solve the problems which other branches of knowledge have found too hard for them. Yet there is an important respect in which philosophy has unquestionable scientific value, namely, in the critical examination to which our ideas must submit, if we attempt to give them the unrestricted application which they naturally receive when we make them factors in a general view of the world.

Mechanics is, for instance, one of the most perfect sciences we possess, and has, until recently, dominated modern thought in general more than any other. But I doubt very much whether any one fully appreciates what the basal ideas of mechanics involve, which of them are clear and which confused, unless he has attempted to carry out those ideas comprehensively until, in terms of them, the whole world is construed as one vast machine. Even if the result must be set down as inadequate, a new insight into the principles of mechanism has been gained and one is better fitted to estimate the value of mechanical ideas and the limits of their application. Such an advantage is heightened by the fact that the study of philosophy affords other systematic views of the world besides the mechanical view. I may mention the idealistic philosophy which lays emphasis on thought and purpose. It affords not only the means of sifting a new set of ideas, but also of criticising other systems. Thus, while different systems of philosophy, when they are looked at only in their opposition to one another, may present a bewildering and distressing choice, when they are looked at together, as various attempts to render our fundamental ideas vigorous and thoroughgoing, they contribute steadily towards making our knowledge clearer and more precise.

There is, moreover, a consideration which gives considerable moral significance to the value of philosophy as criticism. Philosophy is not only an object of study, it is also a persistent human habit. We become philosophers primarily by a kind of natural impulsion. I suppose, for instance, that one very rarely undertakes to investigate some apparently remote and isolated subject solely with the expectation of solving some remote and isolated problem. More often one expects to find, even in the corners of the world, some fact that will illumine its whole character. The man who goes off into the desert to study the life to be found there is apt to care very little about the desert, but much about the general problems of biology and their bearing on the problems of life generally. Our propensity to philosophy is thus shown in our natural curiosity. It is shown also in the way men tend to treat their discoveries. They are wont to see in them something momentous and of wide application. The classic illustration is Archimedes who, having discovered the laws of the lever, cried that he could move the world if only he had a fulcrum. New thoughts extend vision and color the thing seen. Similarly our habitual interests and occupations tend to give particular character to our general view of things. To the economist the factors of history are apt to appear as economic factors, while to the physicist they are apt to appear as physical factors. Indeed it is not easy to avoid thinking that the world must be interpreted in the light of what interests us most, simply because the world has stimulated in us that controlling interest.

Yet to avoid doing just that thing, or to do it with caution and with an enlightened consciousness of what we are about, is to be set down as an important obligation. On its fulfillment depend the wise coöperation and the broad-mindedness of all who seek to increase knowledge and make it contribute to human happiness. Now, to be a philosopher is not necessarily to be generous and cooperative, but the serious study of philosophy is the greatest enemy of prejudice and a splendid remedy for intellectual foolishness. As I have said, philosophy may not be competent—and at present it is not competent—to solve the great problems of life or to afford a short cut to knowledge, but it is competent through its exercise as criticism to promote intellectual sanity, broad-mindedness, and wisdom. That is, once more, an indication of its excellence, and warrants the study of it as a specialty as well as the pursuit of it as a valuable intellectual possession.

The most practical and useful opportunity open to the special student of philosophy is doubtless in education. He who would most successfully teach philosophy is, I am confident, he who has a keen appreciation of the kind of advantage which has been suggested as reasonably to be expected from the study. To exhibit the great systems of philosophy as masterpieces of the imagination wherein others may see the world as some of the greatest minds in history have seen it, to find the spirit of an age or civilization reflected in the philosophy which systematizes its current ideas, to discover often in philosophy one of the controlling forces in theory and practice, to sift fundamental ideas in the light of their widest possible application, and to promote wisdom through the exercise of philosophy as criticism—these attempts afford an educational opportunity which is both attractive and important. Yet I would not confine within these limits the ambition of him who would make philosophy his chief concern. For I venture to reaffirm my faith in philosophy as a body of knowledge. The philosopher may make discoveries as well as any other scientist, but he may make them less frequently. In the face of the remarkable and unexpected results often attained from the generalization of a few ascertained facts, it would not be consonant with experience to affirm that the widest generalizations which the human mind can make are essentially unproductive of new knowledge.

Frederick J. E. Woodbridge

THE FUTURE OF MEDICINE*

IT has seemed to me desirable to offer an address upon the future of medicine before the students of this college at the beginning of a new year's work not for the purpose of idly speculating upon what the coming years may bring forth but rather in order that in so far as we can foretell with reasonable certainty impending changes we may sketch out our plan of action.

It is only through our knowledge of the history of medicine and of the means by which advances have been made, that we are enabled to look forward and complete analogies which are suggested by what has gone before. One may feel quite sure that many unexpected things will happen—indeed I might say with confidence that things almost inconceivable to us now will be familiarly discussed in the newspapers of ten years hence. Hark back for a moment to your own astonishment and incredulity over the idea of looking through a patient with the new Roentgen rays. Of such things I can give you no clairvoyant view—at least it would not be worth while to write a medical version of the Night Mail. All I deem profitable is to complete the picture which is clearly suggested by our meager modern attainments and to reflect upon the results of that completion. Of almost every part of this well rounded outline some unit is already complete, enough to allow us with little or no originality to fill in what now seems likely to prove the whole figure.

The familiar, but none the less astounding, progress of the last fifty years has given us as the fruit of several great conceptions an enormous mass of accurate knowledge. Our eyes have been opened to a whole world of parasitic animals and plants whose inroads are the cause of such a large proportion of the diseases of man and the other animals. We have learned of their direct and remote effects and of the resistance which they arouse and have even been able to foster that resistance and lend it to other individuals than the one first attacked. We have learned to repudiate the old idea of humors and crases and to think in terms of cells, and then we have learned to repent of our high contempt of the old ideas and to come back to the humors.

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* An address delivered at the opening of the College of Physicians and Surgeons, September 29, 1910.

But we must not vaunt our hard-earned knowledge too highly, for with respect to whole races of apparently infectious diseases we are as blindly in the dark as our grandfathers. It is true that we have amassed a store of facts about the structure and the mode of growth of tumors, but of their real nature and of the cause of their growth and of any good method of curing them, we are almost entirely ignorant. Like our forefathers, and with the same hollow words, we speak of melancholia and mania with not the dimmest notion of their true nature. But we are learning fast and the light is not far off.

I am in the habit of saying to you that every ailment is the result, direct or remote, of an injury, and I think that all our knowledge at present supports this view although we are by no means always able to define the character of the injury. In other words, our knowledge of the etiology of disease is far from complete. In such a case it is the more difficult for us to devise a cure and far more difficult to forestall and prevent the disease. All this is true in spite of the fact that what we observe as the symptoms and characters of a disease is generally rather the change in function and the reaction of the body than the injury itself.

Let me dwell upon this idea, for without it there can be no point to what I am about to say. It is not always obvious to the casual observer that a given ailment which comes to his attention is the result of anything which could be styled an injury and even to the physician from the imperfection of his knowledge it is sometimes not apparent. For example, it is difficult for one of the laity to realize that the essential thing in such a disease as pneumonia is the injury. Almost every phenomenon in pneumonia, the pain, the dyspnœa, the consolidation of the lung, the fever—all form part of the reaction, while only the chemical destruction of a few cells in the lung and the general illness are the direct effects of the bacterial poison which is the cause of it all. So, too, with mental and physical defects it may be difficult to detect the existence of an injury which could produce such a distortion and it may be necessary to trace it back one or more generations to its source. I think, however, that it is only in the case of tumors that our ignorance is such that we cannot indicate even in a general way the nature of the untoward influence which set going such a destructive process. Not all of these injuries are sudden or even isolated and indeed the most insidious and difficult to recognize are those which progress gradually, overpowering resistance, and those which, harmless enough for one time, repeat themselves like dropping water until intolerable inroads are made in one organ or the other. Such, for example, are those diseases which we might call wear and tear diseases—chronic Bright's disease, cirrhosis of the liver, arteriosclerosis and so on. In great dilution the drop of poison reaches the liver, destroys a cell or two and is exhausted; but these drops come so fast that, in spite of the healing scars and the hurried reformation of the cells, the pace of the destruction is too great and the patient dies as though that organ had been removed piecemeal.

It is chiefly and primarily with regard to the nature of these injurious agencies and their behavior that we have advanced in the last half century. And that gives us the key to all the rest, for it is relatively easy to avoid a danger that we know or even to annul its effects, although we are sadly helpless before one that comes no one knows how, or whence, and invisibly works havoc with unseen weapons.

I am convinced of the truth of all this and shall leave you to apply it to any given case while we discuss its practical application; for, while such knowledge is interesting in itself, it is of vital importance to us as human beings, for it arms us to keep our health.

It will be of little help to us in this regard to review the history of the earlier epochs of medicine—only in the most obvious instances could be discerned the cause or the nature or even the seat of the disease; and the crudity of the attempts to heal was paralleled by the obscurity of the ideas of hygiene and the futility of the precautions against infection. Health was then, even more than now, in the hands of nature.

In our times new methods of study have been invented and in saying this it seems that we strike the key note which has dominated our progress. It is true that there are thousands of workers now ready to use these methods, as far as they will apply, to uncover the facts; but it is only where some ingenious spirit evolves a new method that we come suddenly upon new fields for the multitude to explore. Nothing can halt this triumphal progress and we may feel sure of much ultimate perfection in our mastery of disease as we can of the ultimate perfection of machinery for flying and for wireless telegraphy. The obstacles to this progress are, and will be, sentiment based on ignorance and unwillingness to think. This will exist always and do its utmost to cripple the efforts of searchers after truth, but even these obstacles I do not regard as serious, for, although they persist with extraordinary pertinacity, they cannot prevail against the flood of public feeling that will demand the light when any hope is afforded. Recall the bondage in which medicine existed when it was an offence against public morals to dissect the human body. Talk with any ignorant person of that great class that looks upon medical men as banded liars, sworn to secrecy and mutual support, whose only lust is for blood and the tearing of quivering tissues—listen to any antivivisectionist as she talks with wide eyes and flushed cheek of the blood curdling horrors she is sure we perpetrate in the laboratory—and then examine your own ideas of the character of medicine and the loftiness of its aims! We have examples of the universal acknowledgment of the triumph of medicine over such blockades already and one may feel confident that, with the perfection of our knowledge when there can be presented to the laity more and more examples of the perfected result of research, the science and art of medicine will assume the commanding position which it seems destined to hold.

It is not easy to define precisely the domain of medicine—there are so many wide fields of study that we must traverse before we approach its boundaries and so many reveal themselves as we proceed that it is difficult to say where, with the growing complexity of life, this domain may stretch. The clergyman reiterates the conception of unseen things formed thousands of years ago and recommends a code of morals. The philosopher and the economist, reflect upon these things and the changing workings of men's minds and try to fit them to the present day needs, while the lawyer deals with their practical applications. But the medical man must study the mental and physical nature of man in his relation to the living, moving world. His duty, in a word, is to maintain the health, bodily and mental, of man by any means in his power. As to the importance of this I will utter no platitudes. There was a time when the health even of the myriads of a nation seemed unimportant when compared with the formal rescue of their souls; but in this matter-of-fact age the public health seems important. More than ever, I think, have we come to recognize the sagacity of the Chinaman who pays his doctor to keep him well and visits vengeance upon him when illness comes.

Medicine would be a far less admirable subject for study were it concerned merely with the discovery of the causes and nature of disease and not with its prevention and cure. This practical application of our knowledge has always been the main reason for the pursuit of such a study and indeed the practical application has generally been attempted even long before sufficient knowledge existed to warrant it. Since the beginning of time man has tried to cure ailments, the nature of which he only dimly perceived, and it is one of the triumphs of medicine that with each new discovery some of these old-time remedies have disappeared.

We must proceed then on our way, assuming that if we take as our final goal the annihilation of disease and the maintenance of bodily and mental health among our people, we shall have an aim toward which a multitude of lives were well spent. Whether there are still higher aims for us above these, remains to be seen.

At present we may roughly survey our knowledge of disease partly according to the type of injury, partly according to the symptoms or the part affected. But personally I believe that, except for the tumors which so constantly form a stumbling block, all the ailments which flesh is heir to are the effects of physical or chemical injuries. Sometimes the physical or chemical injury is produced by the invasion of a living parasite, but the poisons evolved by these parasites are similar to other injurious chemical combinations. Special types we find in those progressive and protracted injuries which result finally in disturbances in function from organic insufficiency or from mechanical disarrangements and these are the conditions which underlie the diseases of metabolism. Mental diseases we rather dimly see as the result of analogous changes in the brain while congenital deformities seem to arise under the strange laws of fœtal reactions from similar causes in utero.

In just the same rough way we may examine our methods of combating these injuries and we find that with the kindly and all important aid of mother Nature we proceed along four chief paths as follows:

1. Patching.
2. Checking the progress of the injury.
3. Preventing the injury.
4. Preventing the appearance of an injured individual (Eugenics).

Of these the first, which I have called patching, is chiefly in the hands of the surgeons who may in their operations make the best of a maimed individual—they sew up wounds and set fractured bones, they reunite nerves or transplant them to replace those destroyed. They make new connections around an obstruction in the intestine or stitch up in place a sagging kidney. Sometimes they graft skin over an ulcer or transfuse blood to save a person who has bled, or they even transplant an organ from one person to another. Sometimes in this way they merely help nature to annul the first effect of the injury, while at other times, as, for example, when a piece of thyroid is grafted under the skin, they cure the symptoms of myxœdema by restoring a function lost through an injury to the patient's own thyroid perhaps long before. Thus this method is useful, often directly life-saving, but, after all, it is patching.

The second—checking the progress of the injury—forms the basis of almost all other therapy, whether medical or surgical. This is the aim of the surgeon when he removes the inflamed appendix, when he drains an empyema, when he hurriedly opens the abdomen to stop the bleeding from a ruptured tube. This is his aim when he extirpates a tumor, or relieves the constriction about a strangulated hernia, or even when he bathes in antiseptics or in a continuous bath an infected wound which he has opened. So, too, when the child with diphtheria is given antitoxin or when the serum is injected into the spinal canal of another with cerebrospinal meningitis. In all these cases and in hundreds of other examples which any one might mention, the injury is a progressive one which might increase until the effect was fatal. Nature in her skilful reactions does much to combat these injuries and probably in the enormous majority of cases succeeds, but sometimes she would fail were it not for the timely help which checks the progress of the injury.

In the third place it is the work of the hygienist in the offices of public health to prevent even the beginning of the injury. No cure can be so good as this ounce of prevention and it is by no means left entirely to the medical man but becomes the subject of much thought and minute care on the part of nearly everyone. Especially in those critical periods of life when the body is not girded up for defence—in infancy, in motherhood and old age this care is bestowed. In a sense, however, this becomes a matter not for individual care but for state intervention when the disease is an insidious infection, apt to spread among many. It is in this very field that medicine has made the greatest strides, stamping out in the beginning epidemics that threaten to lay waste whole cities. Everyone knows this story.

Finally, to complete the work of *preventive medicine,* there is arising and gathering force an effort to so control the reproduction of the human race that no diseased and defective individuals shall be brought into this world. This, the field of Eugenics, so familiar to the breeder of cattle or poultry, is one which is almost undeveloped for the human race and indeed is approached only timorously by the medical man. Control of such matters must be backed by public opinion which, while ready enough in a panic to sacrifice anything to check the cholera, will hardly listen to an appeal to stop the peopling of the world with imbeciles or deaf mutes. Far less will it listen to suggestions toward actually improving the race.

If now we try to estimate the value and extent of the advances we have made in the last half century of toil we shall quickly recognize that they have been chiefly in the *prevention* and *limitation* of *infectious processes.* It is true that there have been devised ingenious new methods of patching—new ways of sewing up weak places where hernias have burst through—new ways of anastomosing intestinal loops—new plans of exploring the brain. But, after all, these depend upon Lister's fundamental advance which was concerned with asepsis and antisepsis—the prevention and limitation of infectious processes in operative surgery.

We are accustomed to think of life as growing daily in complexity and I had it in mind to say that with this increase in the variety of occupations there is a greater proportion of cases in which physical violence and exposure to various chemical substances cause disease. Probably this is true, although it is evident that this is not an age of violence such as those which are past and we merely rapidly exchange one form of prevalent injury for another which becomes obsolete. If now and in the future the demon of speed is responsible for much mangling of bodies we shall perhaps find fewer sufferers from hand to hand encounters, whether in anger or in football, than formerly. Still there is little to foretell about all this—to the end of time the surgeon will have to patch and the doctor to counteract poisons. But it seems that the inventor should stand nearer to the guardian of public health and invent seasonable life-guarding apparatus—and indeed when we examine the processes of manufacture which were once dangerous occupations we find already a remarkable display of intelligence in such protection and the foreshadowing of more.

It is with regard to the enormous mass of infectious processes, however, that we are both making great progress and beginning to learn the extent of our ignorance. So numerous and varied are they that the extent of this group is not yet even to be foreseen—each year brings out the infectious character of some diseases which we have always regarded as due to some disturbance of digestion or some upset in the chemical processes of metabolism and this is not surprising when we consider the short time that has elapsed since the first disease-producing microbes were actually discovered—an achievement that comes almost within our own memory. So elusive are these infinitesimal creatures that even now it is matter of common knowledge that, while we are convinced that such diseases as smallpox and scarlet fever and measles are produced in this way and while we have unlimited opportunity to study them, we cannot find the infectious agent nor say whether it is animal or plant. Indeed we may even trace out, as in the case of yellow fever, practically the whole life history of the organism—follow it through the body of a mosquito—and still we are ignominiously unable to find it. But we are sure that we shall find it before long as we shall find all the rest. It is only as before the question of hitting upon the proper method—the technical method is everything in such a case and we shall find it for we have paradigms already of what can be done, like a French verb worked out in its most minute detail.

Such a paradigm we see in diphtheria where we are familiar with the organism and its mode of life. We know how it reaches its victim and how it produces its ravages. We understand pretty clearly its peculiar poison and have produced a most efficient antidote which with all exactness neutralizes that poison and renders it harmless, and with this knowledge we have robbed diphtheria of most of its terrors though we have not obliterated it from the face of the earth. Even more striking is the power conferred by our fragmentary knowledge of yellow fever, for that has empowered us to drive out absolutely that disease from a whole country.

But the paradigms of French verbs are notoriously irregular and we must be on our guard against relying upon such easy examples. None the less, such is our confidence in human intelligence that we may feel sure that in the course of not too long a time we shall have run to earth every one of these living invaders and learned enough of their life history and poisons to cope with them.

I foresee that our methods will be more and more those of exclusion with the prevention of the disease and less and less those of cure. At present we are searching frantically for cures but with many disappointments. The surgeon excises or washes out and lays open infected areas and prevents the further injury of the patient. The medical man stirs up or aids the phagocytic reaction or injects some serum which will annul the poison or kill the bacteria. In a few instances, as I have described, these measures are wonderfully successful and we feel relatively useful before a case of diphtheria or a case of cerebrospinal meningitis. In one or two instances we have in our possession chemical substances, such as quinine, which will directly kill the parasites, and recently much excitement has been aroused by the efforts of Ehrlich in the direction of chemo-therapy. But, after all, for most infections our methods of cure are pretty feeble weapons. Where the surgeon can excise the whole infected area it is well, but what have we learned to do toward the cure of an established case of pneumonia or typhoid fever or tuberculosis or cholera? And yet in every case we are exceedingly well informed as to the uttermost details of the cause and nature of the process.

I do not see clearly a brilliant future for the pound of cure—I should be willing to pervert the proverb and prefer a grain of prevention.

Even that, however, is shrouded in obscurity before us. We need methods—ingenuity in seizing upon the narrow strategic point and fixing there our blockade. Such a method is that of which I have spoken which, without even seeing the enemy, has been able to rout the army of yellow fever from Cuba. The narrow pass was the necessity for the infection of the *Stegomyia* by biting an infected man. They could not kill all the mosquitoes but they could starve them as far as the yellow fever germs were concerned by hiding all the infected men behind screens and it was the question of only a short time to render all the mosquitoes harmless.

Something like this must be the solution of the malaria problem, too, for we can never kill all the mosquitoes.

But we must *know*—we must discover by fair means or foul the vulnerable points—the Achilles' heel—in each of these monsters and lay our plans accordingly. So there lies before us infinite labor in discerning the nature of each infectious disease and the characters of its causative factor.

The practical difficulties in the application of the knowledge are enormous and, even when we have the requisite information and have decided upon a plan of action, it often seems impossible to put it into effect. Such difficulties are well known to you all in the case of tuberculosis and typhoid fever. They are becoming painfully evident in the case of cholera which rages where ignorance and selfishness prevail, for it is really in most cases the minor difficulties which become predominant at such a time. In Naples, where the water supply is ideal in its abundance and purity, and drainage perfect, there is no good reason why cholera should outrun the efforts of the physicians. Yet when you are there and reflect upon the filth in which the people live and the chance of pollution of the food and milk and water that reach even the better families, the spread of the disease will not surprise you.

Beside these things, when we have actually hammered out a method which will insure the checking and prevention of such a disease, it is pretty sure to cost the sacrifice of much property and of personal relations, and the obstacles which are raised to this are naturally hard to overcome.

But, although I think we realize the stupendous difficulties which lie in the way, let me say again that I have unlimited faith in human intelligence and confidently forecast to you a period not far off when the methods of prevention will *not* involve all these sacrifices, but, by a plan as simple as that in the case of yellow fever or the vaccination for smallpox, we shall expunge from the face of the earth all these diseases, so that the taint of them shall be no more in the land, and we shall view with curiosity the specimens in the museum which remind us, as in the case of the Diplodocus, of what strange things once existed.

It must be evident to you at once that this is the great field for our activity. This is the *future of medicine,* and it is in this that the really great advances have been made, and must be made, in order that we may fulfill our function of maintaining and ensuring health for the human race. Is it not rather astonishing that in the university there is no department of preventive medicine—no group of men devoting their energies to the study of the conditions which are to be contended with, trying to devise plans to meet these conditions and training up men to be really efficient members of the public boards of health?

Let us turn now to another type of disease in which both infections and unorganized poisons play the role of causative agent. Such are the so-called wear and tear diseases which are after all seldom enough the effects of age. These are the chronic, slowly produced changes in the vital organs which are the result of often repeated injuries—cirrhosis of the liver, of the kidneys, of the pancreas, forms of arteriosclerosis with its results, forms of dementia, myocarditis and emphysema. These will always exist and nothing we can humanly foresee can ever prevent them, for, whether they are the result of slight infections or slight imprudences, we cannot forestall them. You can perhaps guard one man from imprudences for a little time, but you cannot guard all of them for all their lives and I think these things will remain. Perhaps we may succeed in giving a man a new kidney, but I am not hopeful in the case of his heart or brain.

In the train of such things come as the result of the inadequacy of an important organ disturbances in metabolism which may seem to be out of all proportion to the size of the insignificant organ affected. Such are the well known conditions myxœdema and tetany, diabetes mellitus and several others in which we have already been more or less successful in replacing the peculiarly necessary secretion of the corresponding glands.

The future among these secondary affections seems bright, and one feels sure that as soon as we are quite familiar with the physiology of those organs which govern metabolism we shall be able by chemical means or by transplantations to control absolutely the diseases which follow their injury. I feel confident that the near future will find us completely changed in our attitude toward diabetes and acromegaly and probably even gout.

On the whole I think we can be least proud of our attainments in the case of mental diseases. Nowhere does one feel so keenly the oppression of hopelessness as in one of those huge institutions where we imprison the miserable wretches who are insane, and yet there is no good reason why our greatest triumphs should not arise among those very people, either through cure or through prevention.

We have come to know that some forms of insanity are the effects of infection, others the effects of unorganized poisons whether absorbed from without or the result of some perversion of metabolism. Some are acute poisonings acting upon a mechanism still relatively intact and disturbing its function, while others are the result of a long series of insults which have left a scarred, shrunken brain for which we can hope to do nothing. Such old dements will always exist even as there will always be cases of Bright's disease, and we must be content to care for them.

Almost all the rest are defectives in whom from their birth the brain has been imperfect to a greater or less degree—sometimes enough to incapacitate them at once, sometimes only to the extent that a further injury readily precipitates them into the group of the insane. These are the effects of injuries in early stages of development or actually inherited effects of ancestral injury and we can hardly expect to cure them.

What then can we foresee in the case of these people? I venture to say that there is very little before them in the way of cure except in those cases where we may be able to annul the effects of poisons which have not yet destroyed the delicate machinery or by setting in order the distant organs which preside over metabolism we may remove these disturbing substances or supply necessary fluids which were lacking.

But we can doubtless prevent the occurrence of the infectious cases. With the disappearance of syphilis will go a series of mental diseases and the psychoses of the acute diseases will take their flight with those diseases themselves. Only the cirrhotic brains of the imprudent and intemperate will always escape us, for they are the price of the man's personal liberty.

Most interesting is the outlook in the case of the defectives—the idiots and imbeciles, the unbalanced and the deaf mutes—for here we shall come into conflict with sentiment. Without further parley I say that it is a crime that any hereditarily burdened individual should be allowed to marry and reproduce his own imperfect kind. One receives foolish sentimental reports of the wonderful work done for such people in schools erected for them—of the determined efforts to teach them to use what is left of their brain to accomplish some manual task and of the sense of success with which they are sent forth into the world capable of making their way. They marry and have children—at any rate they have children, and if they marry it is oftenest with another weakminded person, and this is the flagrant crime, for the offspring will almost surely be only a burden to the state and to themselves. These vessels spoilt in the making should never be let out of the institutions where they are so successfully taught, or, if they are, it should be only after due precautions are taken against their procreation. The obstacle to the complete enforcement of such a provision does not seem insuperable and I am sure that we may confidently expect that the principles of eugenics will soon be carried out in this negative way, at least to that extent. I forbear to speak at length of the application of the same principles to the extirpation of tuberculosis and similar diseases because one feels that before public sentiment can be brought to insist upon this, we may have some sufficiently adequate way of stamping out these diseases so that that will not be necessary.

We have left the problem of tumors which stands out by itself—one of the fortresses which have hardly shown signs of yielding to our siege.

While we have learned a vast deal about the anatomical structure of tumors and their mode of growth and have been able to study a few experimentally by transplantation we do *not* know what causes their growth nor comprehend the principles of their life history and until we do bridge this one gulf we can hardly hope to control them. Only let some one devise a new method of study though, or hit upon some peculiarly favorable opportunity for their study and we shall surely penetrate their secret and then we shall control them. One may be perfectly sure that this will be an achievement of the next few years but I cannot form any conception of the way it will come about.

Whatever will be the result of all these promised victories? Accidents will continue to happen; the surgeon will be always necessary and the medical man to render aid to the poisoned. Infectious diseases will be in time, in spite of undreamed of difficulties, completely annihilated. New ones will spring up from time to time but they will in turn be overcome. Much of the work of the surgeon will be rendered unnecessary thereby and the expectant treatment of the medical man will give place to precautionary measures to maintain the general health. The duties of the obstetrician will probably remain unchanged but his attention will be ever active toward preventing the complications which have always occurred.

The decay of age and the effects of intemperance will persist but we shall control the functions of the important organs and some of them we shall replace when necessary. Diseases of metabolism will come under our power.

Tumors will be comprehended and banished although we have no idea how this will be accomplished. Mental diseases will be cured or prevented excepting for those which come with age and intemperance and in time hereditary weaknesses will no longer be seen because they will not be allowed to appear. Advances in our knowledge will render unnecessary any transgression of sentiment except in this last respect in the maintenance of health. The principles of eugenics will be applied, not only to the defective, but will be so understood that they will be gladly applied by all in the endeavors to improve the race.

On the whole the prospect seems bright for the attainment of a general bodily and mental sanity such as has never before existed. Whether this can be universal it is hard to predict. Whether such bodily and mental sanity will lead to the great social uplifting of the people is also hard to predict. It is impossible for us to foretell what even one decade may bring forth to complicate the conditions under which we live nor what sudden enlightenment may render easy the attainment of our object. Indeed we cannot foretell with certainty that after the passage of time we shall even consider desirable precisely those conditions for which it now seems worth while to spend our lives in effort. For it is conceivable that that perfect mental and bodily sanity which seems to us above all things desirable may, in an age of more minute division of labor and more intense specialization, be incompatible with the development of characteristics necessary to such work. Indeed, since the development of genius and of special individuality and charm seem seldom allied with perfect mental symmetry and balance but rather with some slight defect which allows concentration in another direction, I am not sure but that it might be very dull to live among people of invariable and unblemished sanity But such is the pace of our progress that we may well hesitate before making prophetic speeches.

To the students finally I wish to recall the broad fields upon which it seems that the future physician must inevitably bend his attention. These are the fields in which untiring labor and the constant application of new methods will abundantly repay our life's work and they are as follows:

The pathology of infections and tumors.

The physiology of metabolism and its governing organs with surgical and chemical means of restoring function; incidentally specific therapy. Above all the study of social, biological and technical conditions which will furnish preventive measures against chemical and infectious injuries.

W. G. MacCallum

THE DEPARTMENT OF COMPARATIVE LITERATURE

"THE scope of the department of comparative literature is defined by the facts—(1) that it is primarily concerned with the history of literature; (2) that it takes especial notice of the elements common to various literatures; (3) that it views each particular literature as an element in general European culture, and not for its own sake solely. The courses are conducted with attention to the evolution and inter-relations of particular literatures, to the sequences of history, the development of kinds, and the artistic character of great literary monuments in themselves and in their relations to each other."

This statement, transcribed from the divisional bulletin of information, may for present purposes sufficiently indicate the academic function of the comparative study of literature. To speak in the current language of the air, it reassembles the parts of the machine, usually disconnected for teaching purposes; and shows the machine itself, now from this angle now from that, as it moves in actual flight. The machine is world-literature, constituted by the national literatures in their right functional places, and driven by the myriad-piston motor of individual genius.

The conception of literature as an organic whole—by whatever analogy we describe it—has been the guiding principle of European criticism since Herder, the first clearly to articulate the conception; and the critical problem of the nineteenth century has been to formulate the laws which govern the development of that organism. If the problem is still far enough from solution, at least it remains the problem; and the many-sided attack upon it has led to the successful storming of innumerable vantage-points of fact in literary history.

For obvious reasons, however, inclusion of the comparative study of literature in the college, or university, curriculum has been slow. Seriously to compare and correlate several literatures, or portions of literatures, the student first must know several. He rarely does. Few matriculates even for the higher degrees have more than a fragmentary knowledge of their own literature, or more than a smattering of one or two foreign languages. Gradually, indeed, more students are coming to have wider and better training; and the main reason for this gradual betterment is the diffusion of the idea, even more than the name, of comparative literature. No instructor anywhere, lecturing on Shakspere's plays but will nowadays comment on Shakspere's use of Italian *novelle* for his plots,—or discussing Shakspere's sonnets, make some reference to Petrarchism. The curiosity of the more wide-awake student is aroused: he would find out for himself what a *novella* is like, or what the sonnets have to do with Petrarch. Usually, his only way is through translations; usually, also, if he *is* wide-a-wake, discovering the inadequacy of translations, he starts in to acquire at least a reading knowledge of Italian,—and a reading knowledge of foreign languages is after all the chief need of American students. A more sympathetic observation of this most frequent process of approach to the languages, modern and ancient, might mitigate the scorn, still academically prevalent, for reading—and still more for studying in course—foreign literatures in translation.

The first titular chair of comparative literature in this country was filled by Professor A. R. March at Harvard University; but at approximately the same time (1891), a department of literature was established at Columbia, which, although still stressing for undergraduates English literature, offered to more mature undergraduates and to the constantly increasing number of graduate students other courses of comprehensively comparative kind. For the first three or four years of its existence, this department consisted of Professors G. E. Woodberry and Brander Matthews; between 1896 and 1899 additional courses were given, all comparative in kind, by Professor G. R. Carpenter and Drs. H. O. Taylor, J. E. Spingarn, and J. G. Underhill. In 1899 attention was called to the scholarly and literary efficiency of the department by the publication through the University Press of three brilliant dissertations on comprehensive subjects in literary history by Drs. Spingarn, Chandler and Underhill, alumni of the department.

In 1899 the department was reorganized under the title of the department of comparative literature, with Professor Woodberry as head, Dr. Spingarn as tutor, Drs. Underhill and L. N. Chase as assistants. With some minor changes in its personnel, the department, so constituted, continued until 1904, when on the resignation of Professor Woodberry, it was again reconstituted by the appointment to the vacant chair of Professor J. B. Fletcher, formerly assistant professor of comparative literature at Harvard. With him was associated Dr. Spingarn, made adjunct professor.

Although the department under Professor Woodberry devoted a considerable share of its activity to undergraduate instruction, the importance of its graduate work was constantly growing. Its series of studies in comparative literature, published in attractive form by the University Press, comprised by 1904 eight volumes; and received highly favorable notice from scholars both in this country and abroad. A journal of comparative literature was also prosperously begun in 1902, edited by Professor Woodberry and Dr. Spingarn, with the collaboration of Professor Fletcher. After one complete volume, this journal suspended publication for lack of funds; but there is reason to hope for future resumption in effect in another form.

In view of the great increase in the graduate school, and—it may be—of the unripeness of undergraduates for the comparative method, the department as reorganized under Professor Fletcher in 1904 was expected to devote itself to graduate instruction, and to emphasize more than previously the historical side of literary study. In the main, this expectation has been realized. Both members of the department are agreed, however, that some introductory comparative study is, under proper restrictions, both possible and desirable for undergraduates. Accordingly, in 1906 a general introductory course on the main currents of modern European literature was established by Professor Spingarn.

Although present needs have led the department to emphasize the more technically historical aspects of literature, it by no means intends by such emphasis to deny the educational need of comparative study along belletristic and aesthetic lines. Indeed, when in 1906 the new faculty of fine arts was constituted, the department by invitation drew up a program of courses along such lines. The members of the department were given seats in the new faculty. Up to the present time, however, its work given in the faculty of philosophy has more than demanded the department's full powers. For, to put it mildly, it is naturally impossible for a department consisting of but two professors* to give scholarly instruction in more than a very limited area of the field of European literature. From time to time, indeed, thanks to the generous cooperation of professors from other departments,—especially Professors Matthews, Thomas, Trent, Page, and Lawrence,—it has been enabled to offer additional and valuable courses, and to gain in influence from these distinguished, if temporary, additions to its staff.

Theoretically, the subject-matter of comparative literature is world-literature; so far from being ancillary to any other department of literature, its scope is theoretically inclusive of all of theirs; but practically, in any English-speaking university, English literature is likely to be a prominent, if not the principal, subject in any comparative thesis. Even in the advanced work, not primarily linguistic, of the departments specially concerned with foreign literatures, such is commonly the case. A considerable number, for instance, of the dissertations for the doctorate in the German department at Columbia have been comparative in treatment; and have nearly all discussed the literary relations of Germany and England. The department of comparative literature has always had a reasonable number of students electing it as a major study, and a fair number of students from other departments and faculties electing it as a minor study; but it has unquestionably found its greatest usefulness from the strictly academic standpoint in supplementing the graduate work of the English department. This may arise in part from the historical accident at Columbia that the two departments have had personal affiliations from the start, but it is probably in any case a practical necessity. There are still but three or four departments of comparative literature in the country; most candidates for the Ph.D. are looking for college positions; and at present the best opportunity for advanced teaching in literature is in departments of English. Most of our graduates are now teaching English literature,—though, it is safe to say, they are teaching English literature, as far as the capacity of their students allows, comparatively. Of the sixteen doctoral dissertations already published or in preparation for the series of studies, only three do not lay the the major emphasis upon English literature. Naturally therefore, the relations of the departments of comparative literature and of English literature have been closely collaborative. They have been in the habit of issuing a common circular of information each year, of freely exchanging courses and instructors, of reading and criticizing theses and dissertations written by their respective students. The advantages to all concerned of such solidarity are obvious; and it would certainly tend to realize better the idea of a university if such collaborative relations were more widely extended. It is to be hoped they will be. At Harvard, indeed, a department of comparative literature, widely comprehensive through such collaboration, already exists. But whatever its merits in other directions, the Columbia departmental system does not lend itself readily to an elastic interchange of instruction between departments. In the absence of a special endowment to pay for additional instruction, the department of comparative literature could only beg gratuitous assistance from colleagues already hard-pressed to meet the needs of their own departments. Under the circumstances, and pending some change in them (an endowment, for instance), the head of the department has held it wise to accept the invitation of the English department to form a working coalition to be known as the department of English and comparative literature. The new dual department has been ratified by the president and trustees. The alliance in no sense invalidates the claim of comparative literature to be an independent academic branch of study, or intends to diminish its academic importance. As a committee of the joint department,* those giving instruction in comparative literature will continue to control the administration of courses and other work for the higher degrees; and will continue the series of studies in comparative literature. The subject is still eligible as independently a major or a minor. In fine, the union with the English department is simply a matter of present administrative expediency, and of mutual helpfulness.

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* Dr. Spingarn was promoted to the rank of professor in 1909.

JEFFERSON B. FLETCHER

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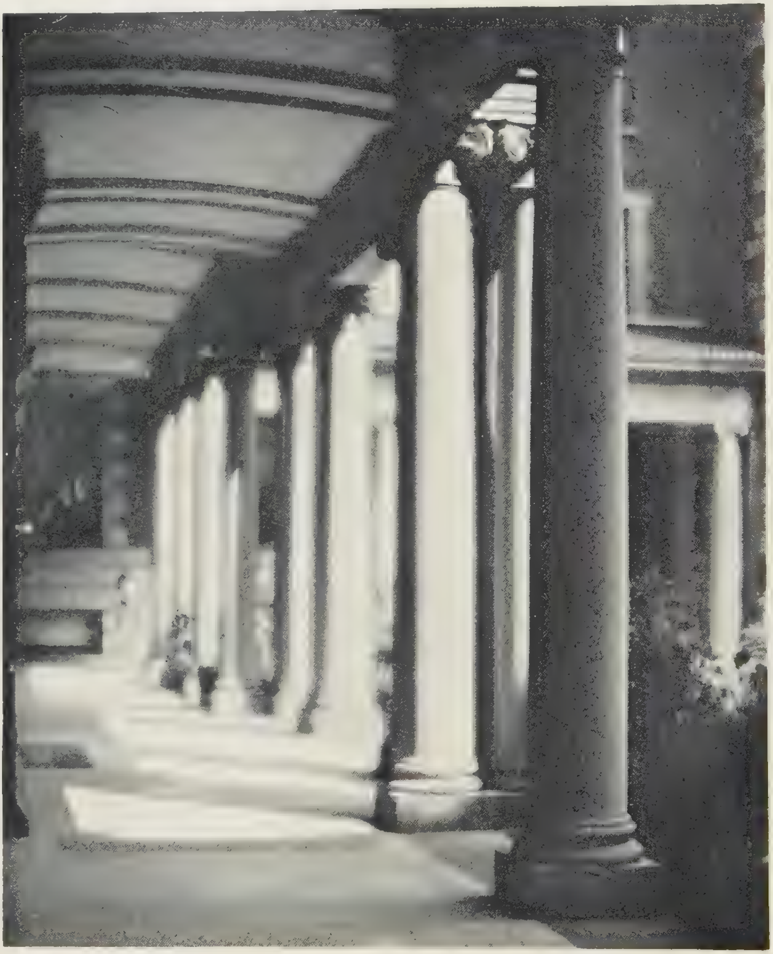
* The committee on comparative literature consists at present of Professors Fletcher, Spingarn, and Lawrence.



PORCH, BARNARD COLLEGE

Karl Struss

UNIVERSITY ORGANIZATION*

IN every language that is still active on the lips of men words are continually shifting their meanings in response to recurring needs; change is a condition of vitality; and as the English language is now the mother-tongue of many millions scattered far from the little island where it was first spoken, the changes are perhaps more abundant and more rapid in it than in any other modern language.

Although the cohesion born of English literature may be relied upon to keep our speech one and indivisible, still divergent circumstances are continually bringing about differentiations of usage in the accepted significance of certain words in Great Britain and the United States. The educational systems of the two nations are strangely dissimilar and therefore certain words convey different meanings on the opposite shores of the Western ocean. "Public School," for example, is to an Englishman a wholly different thing from what it is to the American; and a kindred differentiation is to be seen in the use of the words "College" and "University." At Oxford and Cambridge a university is composed of a group of colleges, and a college is generally thought of as a constituent element of a university. At New Haven and Princeton a college is an institution of learning where a student remains for four years as an undergraduate, devoting himself to the liberal arts whereby he is supposed to acquire breadth of outlook, and a university is the larger organization, which includes the college but which is characterized more particularly by the allied professional, technical and graduate schools.

Unfortunately there are in the United States many so-called colleges which are only high schools and many so-called universities which are only colleges. Of late years those in charge of our colleges have seen that the American college has an honorable work of its own, quite distinct from the task of the university and quite as important; and there is evidence of a slackening of the tendency to expand the college into the university needlessly. The recent American differentiation of the sphere of the college from that of the university is slowly establishing itself. There was really no true university here until after Dr. Gilman became President of Johns Hopkins. Only by degrees did we awake to the perception that the distinguishing characteristic of a university was to be found in its thorough training of graduate-students, and that the function of the university was to give depth while the function of the college was to give breadth. In other words the work of the "college" must underly that of the "university" and sustain it. And this special meaning of the word university is peculiar to the United States. Indeed, it is a curious fact that the idea evoked by the word in the mind of an American is quite different from that evoked in the mind of an Englishman, just as the English idea is in its turn quite different from that evoked in the mind of a German. According to the German understanding of the word, Oxford has probably no right to entitle itself a university; and perhaps no illustration would make clearer the divergent points of view which are taken in different countries as to what a university is.

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* Revised from the *New York Times* of September 17, 1910.

There are now in the United States a dozen or more universities which actually deserve to rank as universities; each of which attains to the standard set up in the report of a Committee of the National Association of State Universities, which defined the American university "as an institution which should include (1) a college resting on a four-year high school course and offering two years of general or liberal work and two years of university work; (2) professional courses in law, medicine and engineering based upon the completion of two years of college work; (3) a graduate school properly equipped for research work."

This definition recognizes the historic fact that most American universities have been developed out of colleges. Here and there a college, favored by opportunity, established or took over a law-school or a medical-school, a school of applied science or a school of architecture, developing also in time a logical scheme of graduate studies in the same subjects which were taught in more elementary fashion in the four year program of the college itself and in other subjects fitted only for maturer students. This accretion of allied professional schools and this evolution of a graduate school was often more or less accidental. Rarely was it deliberately planned; sometimes indeed it seems merely to have happened by force of circumstances. The expansion was different in different institutions and in no two of them was it precisely parallel.

Because of this fortuitous evolution, it would be unreasonable to expect any uniformity of type. Harvard and Johns Hopkins are not organized or administered as are the University of Virginia or the University of Michigan. There may be an equal insistence upon standards and an equal desire to attain to the loftiest and largest ideals of public service; but as yet there is little agreement in administration and still less in organization. They may be united in knowing what ought to be done, but every one of them is seeking to do this in its own fashion. They are each of them facing questions which are akin but not alike. Although there is insistent discussion of the fundamental principles underlying these problems, almost the only treatise which has yet appeared is Dr. Eliot's "University Administration," and the wide utility of this is diminished by the fact that its author confined his attention solely to the form of university organization with which he was familiar at Harvard.

If there has been only one treatise on the subject, it has been discussed in many presidential reports and in not a few articles by professors. Professor Cattell of Columbia has made several very radical suggestions; Professor Jastrow of Wisconsin and Professor Creighton of Cornell have expressed their views at length. Here are some of the questions which are still unsettled: Is the university president generally too much of an autocrat? Is it necessary even to have a president at all? Should the duties now discharged by the president be divided between two officials, one of whom should be elected by the faculty. If there is to be a president what should be his relation to the trustees on the one hand and to the faculty on the other? What should be the limitations of his authority? Should the faculty have absolute control of all educational matters? Should the powers of the trustees or overseers be confined solely to financial administration? Should the trustees or overseers be elected by the alumni? Should the faculty have the exclusive right to nominate to all vacancies, calling their future colleagues without any consultation with either president or trustees? Should the salaries of all full professors be exactly the same? Should the professors have the exclusive right to appoint the junior officers of instruction? Should the library be controlled by the faculty? If the idea of a university as "the home of independent scholars" is sound, ought its complete control to be confided to those scholars? Ought every department to be governed by a head professor or is it feasable to have a democratic organization in which all the professors engaged in teaching a subject share in its administration? These are only a few of the questions at issue; and it is not too much to say that there is no agreement as to the final answer to any one of these. At Columbia we have found a solution for every one of them,—a solution which is satisfactory to us.

Sooner or later all these questions will have to be faced by every American university, and each one of these institutions can profit by the experience of all the others. What they all need therefore is ample information as to each other's organization. As the organization of Columbia University is little understood, there may be advantage in explaining here just what it is, not because it is necessarily the best in all respects but because it may have elements of efficiency likely to be useful to other institutions.

Columbia University is the name given to the body of schools which have grown up around Columbia College. First of all there is Columbia College itself,—the King's College of a century and a half ago. Then there is Barnard College, which supplies the corresponding four-year undergraduate course for women. In addition to these there are the Law School, the Medical School (called the College of Physicians and Surgeons), the School of Fine Arts (which has charge of the students of architecture and of music), the School of Mines, Engineering and Chemistry, the College of Pharmacy, the School of Political Science, the School of Pure Science and the School of Philosophy (which also has charge of the graduate work in the ancient, modern and oriental languages and literatures). Finally there is Teachers College. Each of these eleven schools has its own faculty and its own Dean (except that a single dean acts as executive for the three graduate-schools of Political Science, Pure Science and Philosophy). Each of them manages its own affairs,—except that all matters affecting two or more schools are under the control of the University Council, which consists of the deans of the several schools, with elected delegates from each of the faculties. This University Council resembles the United States Senate in that it speaks for the institution as a whole, while each of the several schools is like a state of the union, with its dean as its governor and its professors as members of the Assembly.

Although Barnard and Teachers Colleges and the College of Pharmacy are integral parts of Columbia, they have separate boards of trustees, responsible for their financial support. The eight other schools are wholly under the control of the Columbia trustees. At Columbia there is no division of authority, no doubt as to the ultimate sovereignty; the trustees are absolutely supreme. They have delegated powers to the University Council, to the several faculties, and to the president; but these powers they have the right to resume if they see fit. The appointment of every officer is either for a limited term or "during the pleasure of the trustees." They are a self-perpetuating body composed mainly of alumni and now regularly electing certain members designated by the various alumni organizations. They have special committees on finance, on education, on buildings and grounds, on honors; and the membership of these committees changes annually so that every trustee may have opportunity to acquire more intimate acquaintance with the workings of the institution. The formal minutes of the trustees meetings are regularly published in the COLUMBIA UNIVERSITY QUARTERLY, so that all who are interested can learn exactly what has been resolved upon.

The President is the connecting link between the trustees and the several Schools. He presides at the faculty meetings of every school and also at the monthly meetings of the University Council. He also attends the meetings of the trustees not *ex officio* but as a full member regularly elected. He does not preside at the meetings of the trustees, who choose a chairman of their own. Thus he sits with the trustees as an equal, ready to explain and to advise; but their organization is independent of him, if they should cease to be satisfied with him. Walter Bagehot asserted that bank directors ought not to be bankers but men of affairs, capable of choosing the the fittest man for the actual work of banking. So the trustees of Columbia are not educational experts but men of affairs, choosing the fittest man for president, allowing a large liberty to the several faculties, and keeping themselves fully informed as to efficiency of the whole. So long as any school is accomplishing all that may reasonably be expected the trustees refrain from all interference; and it is only when a faculty seems to be not quite awake to all its opportunities that the initiative of the trustees is necessary.

Such in brief outline is the organization of Columbia University. Perhaps its machinery may appear cumbersome; but it works without undue friction. The several parts are tied together by the omnipresence of the President and by the existence of the University Council in which every faculty is represented. There is, however, yet another bond of union between certain of the several schools. The professors who teach the same subject constitute a single Department, whatever the schools they may be attached to. Perhaps I cannot better exemplify the value of this departmental organization than by a description of the department with which I am myself connected,—that of English and Comparative Literature. In Columbia College, in Barnard and in Teachers Colleges and in the School of Philosophy (which has charge of the post-graduate work), there are altogether eighteen professors of the two allied subjects of English and Comparative Literature. We have control of the instruction in the three colleges, in the graduate-school, in the Summer Session, and in the extension courses. We hold regular meetings and keep minutes. We have chosen an executive (called the Secretary of the Department), who is responsible for the immense mass of detail. We have committees on undergraduate students, on the candidates for the Master of Arts degree and on the candidates for the doctorate of Philosophy. We discuss all questions of policy in "town meeting"; and it is pleasant to record that our final decisions have always been unanimous. We canvass the best available candidates for all vacancies in the teaching staff (in either of these subjects); and it is pleasant also to record that the candidates we have recommended to the President have always been appointed by the trustees. We transmit to the President every year (when the university budget is being made up) a full statement of our present situation and of our future needs; and yet once again it is pleasant to record that the trustees have always tried to grant our requests for expansion so far as the finances of the university would permit. No department could be more harmonious in its membership, freer to do its necessary work in its own fashion, better supported by the President and by the trustees than is the department of English and Comparative Literature at Columbia.

Yet another bond of unity is due to the combination of kindred departments into divisions. The division of Modern Languages and Literatures includes also the department of Germanic Languages and Literatures (with seven professors) and the department of Romance Languages and Literatures (with eight professors). This division holds a public conference two or three times a year, attended by the thirty-odd professors, by all the subordinate instructors and by many of the graduate students.

As I set down here these aspects of the organization of one American university, I cannot help noting its likeness to the British Constitution, a mass of law and tradition, of convention and of custom. And like the British Constitution the organization of Columbia University is satisfactorily efficient.

BRANDER MATTHEWS

AN INSIGHT*

THE engineer had just completed the sign. The parson had hung it up. And there now it was in gaudy red letters over the ranch house door. They lived on a spur of Cheyenne Mountain—they and the Sick Man and the Kid—and they looked across the Colorado Desert a hundred uninterrupted miles as they sat and "took the cure." They were brothers of the order of T. B., and the sign they had just put up blazed out to all the world the deepest feeling of their souls. It read, "No one can truthfully say any good of tuberculosis."

The midday sun beat down upon the plains. Seventy-five miles away a huge ledge of white sandstone, a hundred or more feet high, made a line like a board fence painted white. An insect whirred up in the stillness with the noise of a rattlesnake. A jay bird jeered from the top of a near-by pine tree. The four men lay dozing in their chairs. One of them had a dream: he had a vision of the burden of the world.

Across a vast, wide plain a mighty army toiled; the strangest army man had ever seen since that great host marched round the Eastern desert seeking for the Promised Land. There were women no less than men; little children and old folks bent with years; stalwart youths right ready for all venture and all strife, and they whose faces bore the horrid marks of wasted powers and of challenges ignored. As they went some passed far ahead and blazed the course that should be followed, some prepared the road and built the bridges, cleft the rocks and filled the gaps; some scoured all the land and sought for food and warned of danger or of storm; while others sang, playing on musical instruments, and cheered the march along; and others still bore heavy burdens on their backs, which seemed to be the baggage of the host.

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* Reprinted by permission from *The Outlook* of October 1, 1910. Mr. Stein, who was appointed Chaplain of Columbia University in 1906, was prevented from taking up his duties by a severe attack of tuberculosis, and died on August 16.

And as the sleeper watched, these last claimed his attention. They held a place unique among the rest. For as he looked he saw that they it was who set the pace for that strange march. Progress could not be swifter than their feet. By reason of the loads they bore the others walked all free and unencumbered, and yet these could not go more fast than they, than they who staggered and oft stumbled in their steps—for heavy were the weights upon their backs.

As they who carry its great load advance—not they who blaze its path or make its road or cheer its way along—the human race advances quick or slow.

The sleeper saw, and as he saw he sought to know the nature of these loads, the contents of these packs. He went more close, and on each load he found a word was written. On one was written "Injustice," on another "Bad Inheritance," on another "Vicarious Sufferings," on another "Grief," on another "Disease."

The dreamer slept, and when he woke he thought upon his dream and what was its meaning, if meaning aught it had. And as he pondered it, he heard; he heard from out the old rebellion and long seeking of his soul for explanation of that fate which had been his—his broken hopes and good ambitions killed, his stricken life, his manhood sheathed in idleness and weakness—a voice:

"You sought to be a leader of the host; you chose to be a maker of the road; you would have been a helper or singer in the throng. It could not be. Your task was nobler yet. You are a burden-bearer of mankind. There is the burden of the race, the burden of its folly and its wrong, its ignorance, its stupid prejudice, its sin, its willful violation of the law, its innocent transgression of the rule. Some one must carry that—must carry that great sadness and great pain and weakness, that ineptitude, that care—must carry it that others should go free, that mankind should go forward and go up."

He heard, and as he heard he reached up and took the new-made sign from out its place, and broke it in small pieces. His face showed a great content.

O fellow-bearers of the load we did not choose, the load we fain would have some other carry if we could, remember this—the burden-bearers help the world along!

I know not how it is. I know not all the law. I am only sure of this: the fight that each man fights behind his chamber door for courage and for patience and for faith, he fights not for himself alone, he fights for all mankind; he fights as one who is a helper of his kind, as a blood brother of that One who, in little Galilee, obscure, almost alone, was wounded for our transgressions and bruised for our iniquities, and who upon the cross became the burden-bearer of the human race.

ALEXIS W. STEIN, of the Class of 1891

KINGS COLLEGE ALUMNI—VIII*
CLASS OF 1773

Cornelius Bogert

CORNELIUS BOGERT was born October 13, 1754, and died February 16, 1832, at the age of 78. His father was John who married Abigail Quick on March 16, 1736, and his grandfather was Jan the oldest son of Claas, baptized May 5, 1697, and married Hannah Reck on March 10, 1716. Cornelius was the eleventh of fifteen children. He was admitted to practice law on October 2, 1775, after receiving the degree of Bachelor of Arts from Kings College in 1773. In September 1775 he also became a militia officer. Nicholas and Peter of whom the first was the brother next older to him and the other the brother next younger to him signed a submission to the king in October, 1776. Bogert practiced his profession until his death on February 16, 1832. He was married and had a son John G. Bogert, the Russian Consul at New York and the father of Dr. Cornelius R., Mrs. Gerardus Clark and Mrs. Henry Kneeland. He also had a daughter Abigail born May 20, 1774, and died May 8, 1841. She married Robert J. Thurston and had four children, as follows: Eliza Ann, who was born July 1, 1802, and never married; Cornelia Emmeline who married Jesse, the son of Gould Hoyt; Louis Marion who married Elizabeth S. Brewer and a fourth child who died in infancy.

Frederick Philipse

Frederick Philipse was a member of the old Philipse family, whose manor came from Adolphe Philipse, who died unmarried and intestate in 1749, leaving his nephew Frederick, who was born in 1698, as his heir-at-law. This Frederick, the grandfather of our alumnus, died in 1751, leaving a widow and six children.

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* The seventh installment of this series appeared in the QUARTERLY for September, 1910 (pp. 443–446).

Of these children the eldest, Frederick, was the father of our alumnus. He married Elizabeth Rutgers, widow of Charles Williams. The second child was Philip, who married Margaret Marston, and these were the parents of Nathaniel Philipse of the Class of 1773. The third child was Susanna, who married Col. Beverley Robinson, father of Beverley Robinson of the Class of 1773.

Our alumnus Frederick was the son of Frederick, who was the last lord of the manor of Philipsburgh. He received the degree of Bachelor of Arts from Kings College in 1773 and accepted a position in the English army. He was a Captain of Dragoons and retired with the army at the peace. His estates in New York were confiscated and he died abroad in 1785.

The following account of the graduation exercises at Kings College in 1773 are taken from Rivington's Royal Gazette of May 18, 1773: "Tuesday being the day appointed for the annual commencement of the graduates of Kings College in this city a very numerous and splendid audience assembled at Trinity Church. After prayers and a Latin speech by the President, an elegant salutatory oration was delivered with great propriety of pronunciation and gracefulness of action by Mr. Frederick Philipse. The audience was then entertained with a discourse on the happiness of connubial life by Mr. Beverley Robinson, whose just observations on the subject did him much honor. Degrees were after this confered on the following gentlemen: Beverley Robinson, Frederick Philipse and Nathaniel Philipse."

Nathaniel Philipse

Nathaniel Philipse was a cousin of his classmate, Frederick Philipse. The father of Nathaniel was the proprietor of the Highland Upper Patent and his mother was Margaret Marston. Nathaniel had two brothers—Adolphe, who died young, and Frederick, a colonel in the British Army, who married first his cousin, Mary Marston, and second, Maria, a niece of Viscount Page. Philipse was appointed a lieutenant of the 38th Regiment in the service of the British King in November, 1775, a captain in May, 1776, and secretary to Major General Daniel Jones, commander at New York, in 1778. He died in England.

BEVERLEY ROBINSON

Beverley Robinson was born March 8, 1754, and married Anna Dorothea Barclay on January 21, 1778. He was descended from John Robinson, President of the Virginia Colony on the retirement of Governor Cooch in 1734 and afterwards Speaker of the Virginia House of Burgesses. The father of our alumnus was Beverley Robinson who was born in 1723. He was a major in the British Army and present at the storming of Quebec in 1759. He came from Virginia to New York and married Susanna, the great-great-granddaughter of Frederick Philipse, the founder of Sleepy Hollow Church. Accordingly the two Philipse graduates of the Class of 1773 were cousins of our alumnus, Beverley Robinson. The father of Beverley Robinson died in Thornbury, Gloucestershire, England, in 1792, at the age of 69. Beverley refused to subscribe the oath of allegiance to the colonial congress. He was commissioned captain in the English army and in 1777, was made lieutenant-colonel of the Loyal American Guards, of which his father was colonel and Thomas Barclay of the class of 1772 of Kings College, major.

Beverley Robinson with Major Andre settled the preliminaries with Arnold in the proposed surrender and it was he who joined with Arnold in the correspondence intended to instruct Washington how the American commander should act in regard to Andre who was captured though they escaped. After the war he went to New Brunswick and was granted half pay by the government. He lived on his place, Nashwaaksis, on the River St. John, opposite Frederickton, N. B. In 1816 he came to this city to visit his son Beverley and died at the age of 61. He was buried in St. Paul's Churchyard, New York City.

All of the descendants of our alumnus remained subjects of the crown excepting the son Beverley Robinson, Jr., and the grandson Henry Barclay Robinson. Beverley Robinson, Jr., who was graduated at Columbia in the class of 1826, was a lawyer, and died in 1876.

THOMAS SHREVE

Thomas Shreve was born about 1752. It is probable that he was descended from Caleb, who came from England to New Jersey in

1676, and married Sarah, daughter of Derick Areson. Shreve received his degree of Bachelor of Arts at Kings College in 1773 and was a minister. He died in 1816 at the age of 64.

CLASS OF 1774

ISAAC ABRAHAMS

Isaac Abrahams received the degree of Bachelor of Arts from Kings College in 1774. Nothing is known of his personal or his family history.

ROBERT NICHOLLS AUCHMUTY

The ancestry of this man, whose middle name does not appear in the catalogue of 1774, is traced to Scotland where Robert, the immigrant, was born. He is supposed to have emigrated with his father. He had an appointment at the Court of Admiralty and in 1741 was agent of the colony of Massachusetts in England. He died at Boston in April, 1750. His son Samuel, the father of our alumnus, was born in Boston on January 16, 1722, and graduated from Harvard in 1745 with the degree of Bachelor of Arts, receiving the degree of Master of Arts from the same institution in 1746 and the degree of S.T.D. from Kings College in 1767 and from Oxford, England, in 1774. He was governor of Kings College from 1759 to 1764, when he resigned to become rector of Trinity Church, New York, on August 28, 1764. Here he continued to officiate until his death on March 6, 1777.

Dr. Auchmuty had three sons: Robert Nicholls, who graduated from Kings College in 1774 and Richard and Samuel who both graduated from Kings College in 1775. Robert N. Auchmuty and his two brothers joined the King's forces after graduation.

WILLIAM CHANDLER

William Chandler was born in New Jersey, being the son of Rev. Dr. Thomas B. Chandler, who was for thirty-eight years rector of St. Thomas Church at Elizabethtown, New Jersey. Oxford College, in England, gave him the degree of Master of Arts in 1753 and the degree of Doctor of Divinity in 1766, and Kings College gave him the degree of Master of Arts in 1758 and the degree of

Doctor of Divinity in 1767. He graduated at Kings College in 1774 with the degree of Bachelor of Arts. In January, 1776, he fled on account of his loyalty and parentage, but returned in December and remained until the evacuation of Elizabethtown by the Royal troops in January, 1777. He states these facts in a memorial to Lord George Germain in 1779 and adds that General Skinner gave him a warrant to be captain in the New Jersey Volunteers in April, 1777, but that he had received no pay for two years. He prays his Lordship's recommendation to Sir Henry Clinton for a commission. He died in England on October 22, 1784, at the age of twenty-eight.

EDWARD DUNSCOMB

Edward Dunscomb was born in New York on May 23, 1746. His father, Daniel Dunscomb, married Maria Aartse on July 24, 1725, and died in the summer of 1749, as letters of administration on his estate were granted on September 13, 1749. Dunscomb died on November 12, 1814, at the age of sixty-eight. He served as a lieutenant in the First Regiment of New York Militia Volunteer Infantry in 1775 and 1776, as lieutenant in the Fourth Regiment of New York Militia Volunteer Infantry subsequently, as lieutenant in the Fourth Regiment of New York Continental Infantry in 1776, as captain-lieutenant in the same regiment in 1778 and as captain in the same regiment in 1780 and 1781. He served as sheriff of New York City in 1810 and 1811 and as trustee of Columbia College from 1795 to 1814. In the Battle of Long Island he was captured and made a prisoner.

NICHOLAS HEYLIGER

Nicholas Heyliger received the degree of Bachelor of Arts from Kings College in 1774. Nothing further is known about him.

JOHN JAUNCEY

Little is known of John Jauncey, although the identity of his father seems to be fairly well established. John was the son of James Jauncey, a sea-captain who came to New York from Bermuda in 1743 with his brother John. They owned many privateers during the French war. James Jauncey was a wealthy merchant, a prominent member of the Presbyterian Church in Wall Street, a member of the Provincial Assembly and a founder of the Chamber of Commerce. He was a Loyalist, was arrested by the Sons of Liberty and sent by them to Middletown, Connecticut. After the war his estates were confiscated and he was banished. His sons, John, our alumnus, and William Jauncey petitioned on January 22, 1790, for a repeal of the decree against their father. The repeal was granted in the following April but the father had died in London, England, in February, 1790.

John Jauncey had two brothers, William and James. William Jauncey was born in New York on December 17, 1744, graduated at the College of New Jersey in 1761, never married, and died September 19, 1828. James Jauncey was born about 1747, graduated at the College of New Jersey in 1763, married on November 23, 1773, Eleanor, daughter of Andrew Elliot, and died on August 8, 1777, in his thirtieth year without issue.

Henry Nicoll

Henry Nicoll is a descendant in the fifth generation from Matthias Nicoll, a nephew of Col. Richard Nicoll, the first English governor of New York. The father of Henry was Benjamin Nicoll, Jr., who was born March 17, 1718, and was a founder and a governor of Kings College from 1760 until his death in April, 1763. Our alumnus married Elizabeth, daughter of General Nathaniel Woodhull, and they had three children: Edward Holland Nicoll, who married Mary, daughter of Solomon Townsend; Eliza Woodhull Nicoll, who married Richard Smith, and Henry Woodhull Nicoll, who married Mary, daughter of John Ireland. A brother of Henry is Matthias Nicoll, who graduated in the class of 1776 at Kings College.

George Ogilvie

George Ogilvie was the son of Rev. John Ogilvie, who was graduated at Yale College in 1748 and who received the degree of Master of Arts from Kings College in 1767 and the degree of Doctor of Sacred Theology from both Yale College and Aberdeen University in 1770. His mother was Catharine Sims and his grandfather was William Ogilvie, the youngest son of Sir Walter Ogilvie, afterwards Baron Ogilvie of Deskford, Scotland. From 1770 to 1774, when he died, the father, John Ogilvie, was a governor of Kings College. The father of Ogilvie married also Margaret Marston, the widow of Philip Philipse, and the mother of Nathaniel Philipse of the class of 1773 Kings College and a sister of John Marston of the class of 1760 Kings College.

Our alumnus was born in New York City on October 16, 1758, and after graduation at Kings College in 1774 was commissioned in the King's New York Loyalists. After the peace he went to England with the loyalists, but returned a few years later and was ordained deacon in 1787, priest in 1790, and was installed rector of Christ church in New Brunswick, New Jersey, where he remained until 1790, when he was called to St. Paul's Church, Norwalk, Connecticut. He remained here until 1796 and on October 26 of that year he was transferred to Christ Church, Rye, New York, where he continued until his death at that place on April 3, 1797, at the age of thirty-nine. He was tall and noble-looking. He married first on September 4, 1788, Amelia, daughter of Cornelius Willett, of Willett's Point, who bore him two daughters: Elizabeth Anne, who was born July 20, 1779, and married Thomas Belden of Fairfield, Conn., and who died on January 16, 1846; and Amelia, who was born on December 13, 1780, and married Jabez Comstock. After the death of his first wife our alumnus on March 18, 1781, married the daughter of Dr. McWhorter, of Newark, New Jersey, who left no children.

JOHN RAPELJE

Little is known about John Rapelje. It is not even known positively how he spelled his surname, whether Rapalje, Rapelje, Rapalye or Rapelye. It has been noted that in 1774, the year in which this man received the degree of Bachelor of Arts at Kings College, a man of the same surname was a member of the Committee of Correspondence in New York and in the next year, 1775, a man bearing this name was a member of the Provincial Assembly.

Rapelje was undoubtedly descended from Joris Jansen de Rapalie and Catalyn, daughter of Joris Trico of Paris. There was a John Rapalje at Newton, Long Island, who was in the British service and after the war went to Nova Scotia, where he married Lemma Boice who came from New Jersey. They had two sons, George and Jacob. He died on April 5, 1829. There was also in the class of 1791 at Columbia College a George Rapelje who was born in New York on August 9, 1771, and was admitted to the Bar.

BENJAMIN SEAMAN

Benjamin Seaman was descended from Captain John Seaman, who came from England about 1635, settled at first in Salem, Massachusetts, in 1643 and afterwards at Hempstead, Long Island, in 1657. He was a man of prominence there and held positions of trust. He was a Friend and had a very large family, some members of which subsequently married and moved to Suffolk, to Staten Island and up the Hudson.

Little is known about our alumnus, but it is believed that he was a son of Jacob and Ann Seaman and that he was born on November 11, 1753. He was moderate in his views at first, but in July, 1783, announced his intention to remove to Nova Scotia. He petitioned for a grant of land there and emigrated. His property in New York was then confiscated. There are graduates of the name of Seaman at Columbia in 1795, 1802, 1804 and 1805. There was a Benjamin Seaman, who was chairman of the Committee of Correspondence when the war began. It is believed however that he was not the alumnus of 1774.

EDWARD STEVENS

Edward Stevens received the degree of Bachelor of Arts from Kings College in 1774 and studied medicine elsewhere. After receiving the degree of Doctor of Medicine he was appointed Special Commissioner to San Domingo in 1793. In 1794 he was appointed Professor of the Practice of Medicine in Columbia College, succeeding Dr. Samuel Nicoll, who graduated from Kings College in the class of 1774 with the degree of Doctor of Medicine. Dr. Stevens resigned his professorship in 1795. Dr. Nicoll became a trustee of the college in 1795 and died in 1796.

ROBERT TROUP

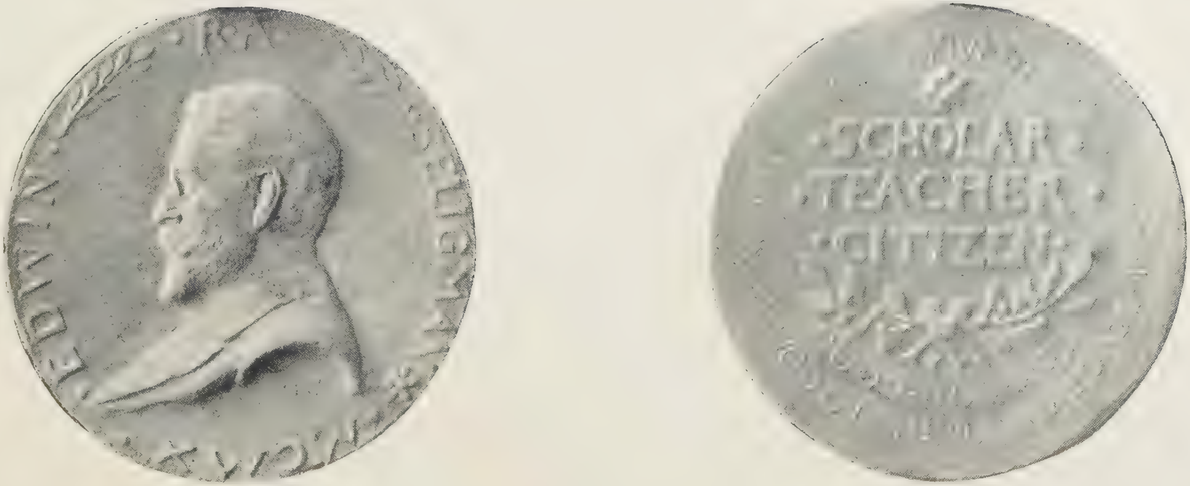
Robert Troup was born in New York City in 1757. He was a patriot and soon found himself in the ranks of his country's defenders. He was a lieutenant in the militia of New York City in Lieutenant-Colonel Andrew Stockholm's regiment and did duty in 1775. In 1776 the seat of war was transferred to New York, where the English commander had reason to expect less violent resistance than he had experienced at Boston and where he hoped to cut off the east and overawe the center, since he knew he would have little to fear from the Southern Colonies. In August Howe landed 20,000 disciplined troops on Long Island, to meet which Washington could send but 8,000 levies and militia, mostly undrilled, inexperienced, poorly equipped and not well armed. The pass at Bedford beyond the American left was unguarded and General Sullivan, who saw the impossibility of maintaining a solid line of defence for five miles with so small a force and no cavalry, sent four officers among whom were Robert Troup, our alumnus, and his classmate, Edward Dunscomb, to reconnoitre the enemy. These young men were lieutenants in the First New York Regiment under command of Colonel McDougall, some of which had been to Canada with Montgomery at the attack of Quebec. They were volunteers now with Sullivan and in the attempt to perform the duty assigned to them they were captured at three o'clock on the morning of the twenty-seventh of August by the advancing army, which immediately passed into the American lines almost unannounced and the day was decided. Troup was exchanged on December 9, 1776. He was afterward major aide-de-camp to General Gates in October, 1777, and secretary of the Board of War in February, 1778. This position he resigned on February 8, 1780. His complete military record was as follows: Second Lieutenant of First Regiment of New York Militia Volunteer Infantry, 1775; Captain Lieutenant of Second Regiment of Continental Corps Artillery, 1777; Major and Aide to Major-General Gates, 1777; Lieutenant-Colonel and Deputy Muster Master General, 1777; Secretary of Board of War, 1778–9.

Troup was a lawyer by profession and was also awarded the degree of LL.D. Soon after the close of the war he removed to Geneva, New York, where he became the agent of Sir William Pulteney's estates in western New York. He married Janet, daughter of Peter Goelet. He had two sons who died unmarried and one daughter who married James L. Brinkerhoff. Some of his descendants are now living in New York City. Troup was a member of the New York legislature, and in 1796 was appointed Judge of the District Court of the United States for this district. He was a trustee of Columbia College from 1811 until his resignation in 1813. He died in New York City on January 14, 1832, at the age of 75.

The following pamphlets written by our alumnus are in the library of Columbia University:

1. A vindication of the claim of Elkanah Watson, Esq., to the merit of projecting the lake canal policy as created by the canal act of March, 1792, and also a vindication of the claim of the late General Schuyler to the merit of drawing that act and procuring its passage through the legislature. By Robert Troup, Esq., Geneva, N. Y., 1821, 8vo, pp. 23 + 38.
2. A letter to the honorable Brockholst Livingston, Esq., one of the Justices of the Supreme Court of the United States, on the lake canal policy of the State of New York. Robert Troup, Esq. With a statement of additional documents. Albany, 1822. 8vo, pp. 38 + 34 + 42 + 5.
3. Remarks on the Trinity Church Bill. New York, 1846. 8vo, pp. 89.

Leonhard Felix Fuld



THE SELIGMAN MEDAL

EDITORIAL COMMENT

The President's Report

President Butler's Annual Report for 1910 deals primarily, as is natural, with the extraordinary additions to the resources of the University during the year under review. The actual receipts from gifts and bequests during 1909–10, reached the enormous sum of $2,357,979.30, the total amount for the last nine years being more than $13,000,000. An appropriate tribute is paid to the memory of Mr. John S. Kennedy, not alone as the princely benefactor, but as the shrewd and sympathetic man of affairs who, as a trustee, gave to the University the benefit of his wide experience and sound judgment. The Report also gives the interesting steps leading to the purchase of what we may venture to christen East Field, the new home of the College of Physicians and Surgeons, and speaks of the present and future usefulness of Mr. George Croker's noble gift for the alleviation of human suffering.

The other matters to which special consideration is given in the Report include the discussion of the recent changes in academic grades, titles and compensations, which brings out the fact, not generally realized, that the increases in salaries within the past few years, inadequate though they may be to meet the increased cost of living on Manhattan Island, nevertheless represent the annual income at 4 per cent. upon more than five million dollars. A full report is given of the work of the Committee of Nine. In this President Butler says that, "The work of the University was searched as it has never been searched before, and the widest interest was aroused among all officers of instruction in the work of the Committee and its possible recommendations. If no other good purpose had been accomplished by the resolutions of the Trustees, the impulse given by them to self-examination and self-criticism on the part of the teaching and administrative force of the University was in itself of marked value."

There is, finally, a section on "the Faculties" which is sure to arouse considerable interest and discussion. The introductory paragraph gives the President's views as to the conduct of routine academic business with characteristic directness: "There is strong temptation in a large university to multiply unnecessarily formal business, to institute boards and committees for all sorts of purposes, and even to carry on by elaborate correspondence with officers in adjoining rooms or under the same roof, routine business that could be disposed of in a moment's conversation. The system of faculties or faculty meetings is itself an inheritance from an earlier condition and it must before long give way to a simpler and less unwieldy mode of formulating and shaping the educational policies of the several parts of the University. In fact, already nearly all the business of a given faculty is transacted by a small committee, whose reports are accepted and approved substantially as a matter of course. The question suggests itself, why should not these small committees take the place of the large and unwieldy faculties, and do at once and without the formality of a report and its confirmation, the business which the Statutes commit to the several faculties?"

The New Honor Courses

The new system of Honor Courses in Columbia College has been in operation only a few months, but the results are already most promising. An average of three or four students in each Honor department are doing less class work and more reading. They meet the instructors in the various subjects for frequent consultation. They enjoy special privileges in the library and the laboratories. Though it is early to boast, this new educational broom appears to sweep clean, and to have lasting effectiveness. The Honor men are on the whole doing finer work in their classes, and what is more important, they are creating in each department a nucleus of broad scholarly interest.

The purpose of the Honor system is to foster a reading spirit in Columbia College—to raise up a class of thoughtful, independent men of culture. The danger at present is that some departments may turn their Honor men into research, trying to make them premature graduate students. With further experience it is hoped the work in all subjects will be of the same kind, and the system will produce a definite type of undergraduate scholar.

The Dean of the College of Physicians and Surgeons, Dr. Samuel W. Lambert, in reporting upon the work of that school during the

Dean Lambert's Report

academic year ending June 30, 1910, makes not only a summary of good and progressive public service, but also an outspoken statement of what is needed from the public itself, to make that service better and its improvement swifter.

The most striking feature of the report is a plea for the creation of a university hospital. The Dean says: "I believe that New York City contains a sufficient number of philanthropic citizens who are able and who would be willing to supply to Columbia this need—a hospital for teaching internal medicine and surgery. I believe this is true although the necessity calls for an expenditure, for building and endowment, of six millions of dollars."

Should a wondering layman ask why, in a city of great general hospitals, another great and costly one should be called for so urgently, he would find the answer tersely given in the Dean's reference to "the absolute lack" of power of "every New York school to control its hospital clinical facilities." This means that, when an eminent medical teacher is appointed physician or surgeon to a hospital, the methods and scope of his teaching must be ruled by an authority which, no matter how enlightened, is not primarily and officially concerned with medical instruction. As a result, injurious friction too often arises. Nor is it rare for high positions in hospitals to be given to medical men who, though eminently qualified to care for the patients, are not well qualified to teach their own youthful successors how to do so. Yet the man who can practise, but cannot teach, may alone command the means of teaching; for the teaching of medicine, if effective must be "object teaching."

This was true when the ancient medicine was a hereditary calling, and the Greek fathers taught their sons how, and what, to observe in the sick room; it was no less true later, when Galen noted the opportunities offered by medical service with the legions to observe the anatomy of Germans killed in battle rather than that of the dead apes of his laboratory at imperial Rome; and the same truth was set forth in New York, before the American Revolution, by young Samuel Bard, Professor of Medicine at King's College when there still was no hospital in our city. He successfully urged its citizens to found one, not only for the benefit of the poor, but because a hospital, in his own words, "affords the best and only means of properly instructing pupils in the practice of medicine."

So, for centuries, the private practitioner, the hospital physician, have brought their pupils to the bedside; but the swift march of modern science, the vast broadening of the field of medical study, the very expansion of object teaching itself, enforce more sternly than ever the recognition that "life is short, art is long, opportunity is fleeting." Hence the intricacy of the modern medical curriculum, and the never ending effort of the medical faculties of the world to organize, to correlate, to adjust, the student's tasks. Hence, also, the conviction embodied in Dr. Lambert's report, that the time has come when both the care of the sick and the teaching how to care for them will be the better, if the person who must deal with both at once shall not own allegiance to two independent corporations, but shall be appointed and governed, both as practitioner and as teacher, by one central authority. Elsewhere than in New York, such a system has proved its excellence already.

The first American degrees, "in course" of Doctor of Medicine were conferred in New York by what is now Columbia University. May Columbia soon receive from the public that she most directly serves, the means to be foremost ever, as well as first, in maintaining the eminence of that degree.

Columbia in Pure Science

In *Science* for November 5 and 12 Professor James McKeen Cattell has published an elaborate statistical study of the distribution of the leading American men of science, with the institutions in which they received their training and do their work at present. The tables do not show Columbia in the rosy light which, perhaps too complacently, we have been coming to expect in all comparative statements about American universities. That the relative place of the great universities of the middle West should have risen in the last seven years was to be expected; but that, according to Professor Cattell's figures, Columbia has lost ground in comparison with some of her eastern neighbors, is disconcerting. Even though some of us may be inclined to assume a considerable probable error in the judgments upon which the figures are based it would be most unwise for us to ignore a study of this kind. "Let him that thinketh he standeth take heed lest he fall." In general, however, the conditions in the field of science at Columbia just now are unusual, and we believe transient. Seven years is a short period in the life of a university, and these past seven lean years have seen the retirement, full of years and honors, of an unusual number of our professors, and others have been removed by the hand of death. Ordinarily we shall not have to furnish during so brief a period from our Faculty of Pure Science, presidents for the Carnegie Institution, Dartmouth, and the Massachusetts Institute of Technology. In several cases the University has deliberately postponed the appointment of a successor until it shall be made evident that exactly the right man had been found. It happens that, at the moment, far-reaching plans for advance in several departments of science have been carried almost to the point of public announcement.

Kent Hall

The Quarterly desires to extend to the Faculties and Students of Law and Political Science its hearty congratulations upon their new academic home and the opportunities which it gives for future usefulness and distinction. The keynote of the addresses at the dedication of Kent Hall is the momentous responsibility of those preaching and practising these subjects for the moral and ethical standards of the entire nation.

The Employment Committee

Elsewhere in this number of the Quarterly appears an abstract of the splendid report of the Employment Committee for 1909–10. The sum of $166,777.49 was earned by Columbia students last year. This is an enormous amount, under the circumstances, and the highest yet recorded by the Committee. The total earned by the students through the aid of the Committee, $39,054.02, also shows a commendable increase of $9,808.19 for the year. This large sum of money represents work,—and hard work,—both on the part of the Secretary of the Committee and on that of the students themselves.

Indeed this aspect of the work entailed in earning the money annually reported by the Committee has been too little considered. The excellent opportunities for self-help offered students by the Committee and the undoubted need for this aid have almost led us to look upon the work of the Employment Committee as an unmixed good, instead of what it really is,—a necessary evil. Students come to the University, ostensibly, to get what the University has to offer in the way of intellectual training and culture. For the student to make adequate use of the opportunities for culture he must give the University practically all his time. Any attempt to carry on at the same time outside activities or extraneous work necessitates a corresponding sacrifice of University work. The exceptional man, the one endowed with a sound and robust physique and with a vigorous, ready and alert mind, may without jeopardy to his health or detriment to his intellectual training, pursue outside remunerative employment along with his University courses. But most graduates who have "worked their way through" will recall the cut lecture, the ill-prepared recitation, the neglected reading and the tired mind. Instead of giving their best efforts to the University, they can, perforce, give it only their poorest. This condition is no one's fault; but it is unfortunate. And if a way can be found to mitigate it, an effort should be made to seek it.

In this connection it is interesting to note the relative percentages of the different kinds of work at which the students earned the above mentioned $166,777.49. Of the total, 51 per cent. comes from teaching and tutoring, 9 per cent. from clerical, 8 per cent. from technical, and 32 per cent. from miscellaneous work. The percentage of earnings from teaching and tutoring is high and favorable, but one is probably safe in saying that much the greater portion of the percentage is in teaching elementary subjects and but remotely, if at all, related to University studies. The 8 per cent. clerical work and the 32 per cent. miscellaneous can well be lumped together as pretty nearly all remote. At the rates at which the clerical and most of the miscellaneous work is paid, the sum earned in this way represents an expenditure of time which, while probably adequate for the amount earned, is very likely out of proportion to the amount of time the student devotes to his studies. That is to say, a student who is working his way through in many cases probably does so at the cost of the very object for which he is in college.

But however true this may be the problem of student employment will still be with us, and, in all probability, to an increasing extent. It becomes necessary therefore to consider whether in any way the evil can be mitigated, or made to serve an educational purpose.

The solution of this problem is largely a practical one, and probably can be partly found in an effort to correlate the outside work of the student with his University studies. In a few cases, but only in a few, such correlation is what practically happens in following out the working principle of the Committee, "of the best man for the place." But this happy adjustment is now usually restricted, not so much by choice as by the inherent requirements, to technical positions and to those calling for tutors in advanced subjects. The attempt should be made to apply the principles underlying such a selection to all the applicants for work. By doing so, each student would be given an opportunity to apply in practice the theories he learns in courses.

However, such an attempt to give the outside employment of students some real educational value cannot be done with the present entirely inadequate and greatly overworked force of the Committee. The idea necessitates the careful scrutiny of New York City for positions in which inhere some educational value and which can be adjusted to the exactions of the student's academic duties,—a double requirement, making the finding of such positions difficult, but not impossible; for the city offers many varieties of work, only they must be looked for.

Another advantage of such correlation of work and study is that it would entitle those students working their way through to some consideration in the suggested scheme for the awarding of academic credit for participation in " student activities." For this outside work would be serious, responsible and educational.

It is to be hoped that the success achieved by the Employment Committee last year will win for it the consideration that it deserves in order that it may continue its splendid work on a plane of higher usefulness.

Ralph Roister Doister

The Philolexian Society is to be congratulated upon its presentation of Ralph Roister Doister, not only for setting a much needed example of the kind of dramatics which should be fostered in an academic community, but for giving the amusing old play so excellently. The Society was fortunate in finding at hand so competent and devoted a coach as Professor Tassin.

THE UNIVERSITY

Opening Exercises

The opening exercises of the one hundred and fifty-seventh year of the university were held on Wednesday afternoon, September 28, in the Gymnasium. In the absence of the President, who was participating in the ceremonies attending the celebration of the one hundredth anniversary of the foundation of the University of Berlin, Professor Burgess, the Senior Dean, presided. There was a large attendance of students, as well as of members of the faculties.

Professor Burgess briefly welcomed the students to a new year of work and opportunity. Professor Henry Fairfield Osborn, Da Costa Professor of Biology, spoke on "Huxley on education"; Professor Ernst Daenell, of the University of Kiel, Kaiser Wilhelm Professor for 1910–1911, spoke on "The course of the world's trade since the sixteenth century," outlining the general theme of the lectures which he is to give at Columbia this year. Both addresses appear in full elsewhere in this issue.

Professor Daenell's participation in the programme of the opening exercises was rather an innovation. Recently the Kaiser Wilhelm Professor has delivered his inaugural lecture at a later date. At Berlin the inaugural lecture of the Theodore Roosevelt Professor is a most elaborate function; the Emperor is sometimes present in person. If he is not, the Crown Prince represents him. In our country, with its different educational system, not to mention the absence of anything approximating a court, so elaborate a ceremony at the induction of the Kaiser Wilhelm Professor is manifestly out of the question. This year, however, the University sought to show its appreciation of his presence by giving him an opportunity to speak before a large and representative audience.

The place of the opening exercises is not yet clearly defined. They are a comparatively new development, dating from the removal of the University to its present site. They have lacked thus far, to some extent, the formality and the dignity that characterize the commencement exercises. It is difficult to insure a representative gathering of students from the different parts of the University; the various classes are either without class organization or else the class officers, elected at the close of the preceding academic year, have not as yet entered upon their duties. That it is a good thing, however, to gather the students together from time to time in large numbers in this way, to hear the President or his representative and to listen to an address by some member of the faculty, cannot be denied, nor should it be overlooked. Last year there was unanimous testimony of the value of the special chapel service which attracted large numbers of the students. The tendency of recent University legislation is markedly in the direction of requiring the presence of all members of the teaching force at a day antedating that of the opening exercises; under these circumstances attendance upon the opening exercises cannot well be regarded as a hardship. It remains, then, if the opening exercises are to be a permanent feature of the University calendar, to make them as dignified and impressive as possible. Large numbers of new students come to the University every year; to these the opening exercises may well form one of the really significant days of their University life. Finally, these exercises offer to a member of the faculty with a message to deliver an opportunity to voice that message with the power and life which the written word, however finely stated, can never attain.

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The President's Reception

On the afternoon of November 1 the President of the University and Mrs. Butler gave their annual reception to the newly appointed professors in Earl Hall. The reception was very largely attended by University officers and by the friends of the new appointees and was one of the most successful of these receptions ever held at the University. The new professors are:

Ernst Daenell, Ph.D., Kaiser Wilhelm Professor, 1910–11 (professor of modern history in the University of Kiel); William B. Fite, Ph.D., professor of mathematics; Herbert E. Hawkes, Ph.D., professor of mathematics; George Phillip Krapp, Ph.D., professor of English; Frank Gardner Moore, Ph.D., professor of classical philology; Walter Irvine Slichter, E.E., professor of electrical engineering; Harlan F. Stone, A.M., LL.B., dean of the Law School; George V. Wendell, Ph.D., professor of physics; Milton C. Whitaker, M.S., professor of chemistry; Frederic E. Farrington, Ph.D., associate professor of education; Clyde Furst, A.M., secretary of Teachers College and associate professor of English; LaRue VanHook, Ph.D., associate professor of classical philology; Morton Arendt, E.E., assistant professor of electrical engineering; Harry M. Ayres, Ph.D., assistant professor of English; Charles P. Berkey, Ph.D., assistant professor of geology; Frederick G. Bonser, M.S., assistant professor of education—industrial arts; David Bovaird, Jr., A.B., M.D., assistant professor of clinical medicine; Wilhelm A. Braun, Ph.D., assistant professor of Germanic languages; Charles H. Burnside, A.M., assistant professor of architecture; Anna M. Cooley, B.S., assistant professor of household arts; Jane T. Fales, B.S., assistant professor of household arts; Edgar Fauver, A.B., M.D., assistant professor of physical education; Camille Fontaine, BesL., assistant professor of Romance languages; Grace Fulmer, assistant professor of kindergarten education; John L. Gerig, Ph.D., assistant professor of Romance languages and literatures; Virginia C. Gildersleeve, Ph.D., assistant professor of English; Charles C. Grove, Ph.D., assistant professor of mathematics; Carlton H. Hayes, Ph.D., assistant professor of history; Tracy E. Hazen, Ph.D., assistant professor of botany; Patty S. Hill, assistant professor of kindergarten education; Percy Hodge, Ph.D., assistant professor of mechanics; Azubah J. Latham, A.B., assistant professor of oral English; Dean Putnam Lockwood, Ph.D., assistant professor of classical philology; William H. McCastline, M.D., assistant professor of physical education; Daniel Gregory Mason, A.B., assistant professor of music; James A. Miller, A.M., M.D., assistant professor of clinical medicine; John H. Morecroft, E.E., B.S., assistant professor of electrical engineering; William Noyes, A.M., assistant professor of industrial arts; Raymond C. Osburn, Ph.D., assistant professor of zoology; Henry A. Ruger, A.B., assistant professor of educational psychology; Mary D. Swartz, B.S., assistant professor of household arts; Algernon DeV. Tassin, A.M., assistant professor of English; May Belle Van Arsdale, B.S., assistant professor of household arts; LaMont A. Warner, assistant professor of household arts; J. Paul Jones Williams, M.S., C.E., assistant professor of civil engineering; Curt P. Wimmer, Phar.D., assistant professor of pharmacy; Clifford B. Upton, A.M., assistant professor of mathematics; Nathan E. Brill, M.D., professor of clinical medicine; Rudolf C. Denig, M.D., professor of clinical ophthalmology; Arpad G. Gerster, M.D., professor of clinical surgery; Frederick Kammerer, M.D., professor of clinical surgery; Jacob Kaufman, M.D., professor of clinical medicine; Otto G. T. Kiliani, M.D., professor of clinical surgery; Emanuel Libman, A.B., M.D., professor of clinical medicine; Norbert Stadtmuller, M.D., professor of clinical medicine; Frank D. Fackenthal, A.B., secretary of the University; Charles T. McFarlane, Pd.D., controller of Teachers College.

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Professor Daenell's Lectures.

Professor Daenell, the incumbent of the Kaiser Wilhelm chair of German history and institutions, is lecturing this term on "The course of the world's trade from the sixteenth to the twentieth century." After an interesting survey of the transformation of geographical knowledge by the discoveries of the sixteenth century, Professor Daenell discusses the colonization system of the Spaniards and the Portuguese, the financial houses of the sixteenth century, and the decline of the Italian and Hanseatic trade. He next takes up the mercantile system with the colonial policy of the Dutch, of the French and of the English. Special attention is devoted to the economic policy of Prussia during the seventeenth and eighteenth centuries. The course then treats of the origin of the free trade theory and the revolution of the political system of the powers as a result of economic causes. A lecture is given on the gradual acceptance of the free trade policy up to about 1875, which is then followed by the protectionist tendencies and the imperialism of recent times. The last few lectures deal with the expansion of the United States, the situation of Russia, the recent colonial policy of France, and the development of British imperialism. The course closes with two lectures on the situation and needs of Germany. The lectures have already aroused great interest and are being attended by students in economics as well as in history.

Professor Daenell's seminar is open only to students with a reading knowledge of Latin. The course is devoted to a consideration of the mediaeval sources of the general subject.

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The French Visiting Professor

The Trustees in their October meeting appointed Professor Ferdinand Brunot of the University of Paris, Visiting French Professor for the year 1910–1911. This was in accordance with the arrangement entered into with the University of Paris, which has already been mentioned by the *Quarterly* and the full purport of which will be better understood from passages of a letter sent to Professor Cohn on May 9, 1910, by Dr. Louis Liard, who as Vice-Rector of the Academy of Paris is the head of that University; "I am happy to inform you and through you

President Butler that in its meeting of this morning the Council of the University of Paris decided to cooperate in founding in Columbia University a chair which will be occupied every year by a French professor during the months of October, November and December. The course given by this professor is to be of the same kind as that of the *Conferences* of our Faculty of Letters and would be given about three times a week for students already advanced in their studies. The incumbent will be designated each year by the Council of the University of Paris in agreement with Columbia University. It will not be necessary for him to belong to the University of Paris, provided he belong to one of the institutions for higher study of the French State, such as the *Collège de France, The School of Living Oriental Languages* or some of the Provincial Universities."

As seen by the above letter, the Visiting Professor should have begun his course at the beginning of October, 1910. Unfortunately, illness in the family of Professor Brunot made it impossible for him to reach the University at that time. With great liberality, Dr. Liard has promised to make it possible for Mr. Brunot, if circumstances in his family allow it, to give his course at Columbia during the second term.

It will be noted that the holder of the new chair is not to be necessarily a professor of French or Romance languages. When his subject is in this branch the instruction will be given in French, since all advanced students in Romance languages are compelled to understand instruction given in French. But it is hoped that in time it will be possible through the new foundation to invite to Columbia scholars in other departments—historians, philosophers, mathematicians, that we may have the opportunity of listening to such men as Professor Seignobos, for instance, or to such Romance scholars as Professor Lanson, Professor Roques or Professor Thomas. When in other than the Romance department, the teaching of the Visiting Professor will of course be given in English.

The *Conferences* mentioned in Dr. Liard's letter do not differ materially from the courses known as seminars in American and German Universities.

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It has fallen to the lot of few men still in the prime of life to be honored as was Professor Edwin R. A. Seligman by the dinner given

Complimentary Dinner to Professor Seligman

at the Hotel Astor on November twelfth to commemorate his twenty-five years of public service as scholar, teacher and citizen. Among the two hundred guests who came together to attest their appreciation of his distinguished career were not only his pupils and colleagues at Columbia, but economists from sister universities, federal and state officials, and leading citizens of New York.

The selection of speakers proved to be singularly happy. Not only were all of the addresses of unusual excellence but they displayed a variety of style and treatment hardly to be expected from so many men called upon to deal with one common theme. Mr. R. Fulton Cutting, co-worker with Professor Seligman in the Bureau of Municipal Research, was at once graceful and dignified as toast-master. President Butler spoke for Columbia with even more than his usual eloquence. Dean Burgess claimed for himself the credit for having been Professor Seligman's discoverer, and described with sincere feeling their relations in building up the School of Political Science. President James, of the University of Illinois, and Professor Dewey, of the Massachusetts Institute of Technology, spoke of Professor Seligman's work as an economist and as one of the founders of the American Economic Association. Dr. Adler explained how Professor Seligman's researches in economics had helped to clarify his own views in regard to ethics. In speaking of Professor Seligman as citizen, President McAneny sketched an inspiring picture of the New York of the future. Professor Emery, Chairman of the Tariff Board, sounded a personal note in speaking of Professor Seligman as teacher. Mr. Gaylord White indicated what the social settlement movement in New York owed to Professor Seligman's sympathetic appreciation of its aims and difficulties. Finally Professor Ripley of Harvard added a humorous touch to his tribute by characterizing himself as the oldest living graduate and therefore one qualified to speak with authority. On behalf of Professor Seligman's students he presented the beautiful medal fashioned by Mowbray Clark.* It was an impressive moment when the guest of the evening with deep emotion rose to respond. Deprecating with his habitual modesty the flattering things which had been said of his work, he proceeded with skill and tact to draw attention away from himself to the conditions which had made his career possible. If there was present anyone who cherished doubts as to the worthiness of a living man to hear with his own ears the eulogies that had been pronounced, such doubts must have been resolved by the spirit in which these eulogies were received. Seldom has a more noble ideal been presented of the duty of the scholar, the teacher and the citizen, or a more generous acknowledgment made of the debt the scholar owes to his co-workers in the field of science, the teacher to his pupils, and the citizen to his fellows than those with which Professor Seligman closed this memorable evening.

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* Copies of this medal in bronze may be obtained from Jos. K. Davison's Sons, 10 East 17th Street, New York, N. Y.

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Report of Employment Committee

For the year June 1, 1909–May 30, 1910, Columbia students have reported earnings to the amount of $166,777.49. This sum is by far the largest amount reported since the organization of the Committee sixteen years ago. Last year the reported earnings amounted to $100,223.36. The sum secured directly through the assistance of the Committee has increased from $29,245.83 to $39,054.02—a gain of $9,808.19 or 20 per cent. The amount earned independently of the Committee's assistance has risen from $65,908.89 in 1908–09 to $127,723.47—an increase of $61,814.58, or 77 per cent. Furthermore the amount earned by the students during the academic year, namely $25,812.92—an increase of $4,369.68, is the largest amount ever earned during that part of the Committee's fiscal year. The independent earnings for the same period were $89,702.97. During the summer vacation of 1909 the students earned through the aid of the Committee $13,241.10, as compared with $7,802.59 earned during the summer of 1908; and, independently, $38,020.50, as against $19,700.98 for the previous summer. Of the total amount reported for the year, 31 per cent. was earned during the summer vacation, and 69 per cent. during the academic year. In the different kinds of work at which the students earned this money, teaching and tutoring are represented as 51 per cent. of the whole, clerical work 9 per cent., technical occupations 8 per cent., and miscellaneous occupations 32 per cent.

There were 1093 requests from employers, from which 1010 positions were secured and 83 lost. Last year the corresponding figures were 614 positions secured and 51 lost. Of the positions secured 40 were filled by freshmen of the college, 35 by sophomores, 29 by juniors, and 29 by seniors. In the School of Applied Science, 18 positions were secured by first year men, 7 by second, 9 by third, and 16 by fourth year men. The positions secured by the students in the Law School were distributed as follows: 37 to students of the class of 1912, 49 to those of the class of 1911, and 41 to the class of 1910. Students under the faculty of political science secured 63 positions, those under the faculty of philosophy 43, and 10 positions went to students in pure science. The other positions were distributed among students in other departments of the University.

The average reported earnings per student were, for the summer vacation, $156.76; and for the academic year $383.77.

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Religious Activities

The Sunday afternoon services in St. Paul's Chapel were resumed with the opening of the fall term and have been largely attended. On October 23, a series of six Sunday sermons on "The Reality of Religion" was begun. The preachers and subjects were as follows: Rev. Newell Dwight Hillis, D.D., "The Sense of the Spiritual;" Rev. Henry Sloane Coffin, D.D., "The Reality of God;" Rev. L. Mason Clark, D.D., "The Place of Prayer;" Rev. Malcolm James McLeod, D.D., "Christ the Revealer;" Rev. Raymond C. Knox, B.D., "The Book of Life;" Rev. Lyman Abbott, D.D., "Life Eternal."

An especially attractive feature of these services is the student chorus under the direction of Organist Ward. Each service is followed by an organ recital.

In the College two courses on religion are now offered: one, "Fundamentals of Religion" given by Professor George William Knox, of the Union Theological Seminary; and the second, "Bible Study," given by Chaplain Knox. These courses are opened to all students.

The Secretary of the University Y. M. C. A. has issued the following resumé of its fall work:

"The work in behalf of new students as they entered College was carried on as in former years. This work includes the publication of the Blue Book, the maintenance of the Information Bureau, and of the Board and Room Directory—all of which proved of great service to the students. The annual Freshman receptions were held and greatly enjoyed by the new men.

An innovation in the work of the association was started this year in the form of sight-seeing excursions to different points of interest in the city. These excursions have proved very popular—particularly with the students who are strangers in New York. The settlement work with twenty-two Boys' Clubs under the leadership of Columbia students which was conducted last year has been continued and extended in its scope particularly at the Spring Street Settlement. These clubs were instructed in manual training, debating, dramatics, music, military drill and in other activities. In addition to this boys' club work, over three hundred articles of clothing were distributed to needy men through the Bowery Y. M. C. A. In line with the same kind of work parties of students have been organized to visit the public institutions on Blackwell's Island, to sing college songs and to distribute magazines to the inmates. Also a number of students have been teaching English to foreigners in different parts of the city. At the University the classes in stenography and typewriting, which proved so valuable in enabling students to earn money to pay part of their expenses while in residence, were started with a large enrollment. The class in "First Aid to the Injured" began with twenty students.

During the summer at Camp Columbia, the work of the Y. M. C. A. was particularly effective. The special secretary at the camp, Mr. F. S. Cooper, is a medical student, and proved himself most efficient in attending to the cases of minor injuries as well as to the religious work of the Association.

The Christian Association is co-operating closely with the Chaplain in building up Chapel and Sunday services.

The Churchman's Association and the Brotherhood of St. Andrew have prepared plans for a winter of effective work.

* * *

Press Activities

Since the last record of Press publications in the *Quarterly* seven volumes have been issued, four of them in the Columbia University Studies in English, one in the Columbia University Germanic Studies, an additional volume of Blumenthal Lectures, and a second edition, revised and considerably enlarged, of Professor Munroe Smith's book on Bismarck, the original edition of which, published in 1898, had been exhausted.

The four volumes of the Studies in English are, in the order of their appearance as follows: "Leigh Hunt's relations with Byron, Shelley and Keats," by Barnette Miller; "Thomas Carlyle as a critic of literature," by Frederick William Roe; "The authorship of Timon of Athens," by Ernest Hunter Wright; and "English tragicomedy," by Frank Humphrey Ristine.

Dr. Miller explains in her preface that the relations of Leigh Hunt to Byron, Shelley and Keats have been treated in a fragmentary way in various works of biography and criticism, and from many points of view, but hitherto there has been no attempt to construct a whole out of the parts. Her volume admirably fulfils this office. Her conclusions are that in the case of Shelley it was Hunt the man that held him; Byron, too, like Shelley was attracted by Hunt's charm of personality; the relation with Keats, however, was throughout an intellectual affinity.

Dr. Roe begins his monograph with a consideration of the particular foundation in Carlyle's case for a literary life, and discusses his ideals of literature and of criticism; his relation to the literature of romanticism; his place in the introduction of German literature into England; his application of his criticism to Goethe and Voltaire; his three English essays on Burns, Boswell's Johnson, and Sir Walter Scott; his transition from criticism to prophecy; and concludes with an estimate of Carlyle's criticism as a whole and of its service in English literature.

Dr. Wright prefaces his book with a statement of the extraordinary enigmas presented by "Timon of Athens" with respect to its date, its history, its sources, and its authorship. No exhaustive study of the matter has been made and the author to clear up the problem assembles anew the evidence hitherto at hand and adds considerable of his own. He concludes that Shakespere was the first writer to touch the play; that all the plot is his; and that an interpolator, himself unknown, has extended the play by scattering through it no less than a third of its present material.

Dr. Ristine's book is a successful attempt to present a comprehensive survey of English tragicomedy, as a whole a relatively unexplored field in English drama. The author considers the origin of tragicomedy and its early foreign developments; its beginnings and transitional development; its height and decline in England; and its concluding aspects at the close of the seventeenth century. The book contains at the end a list of the English plays, including those no longer existant, that belong to this class of dramatic composition.

In his monograph on "Grillparzer as a poet of nature," Dr. De Walsh, beginning with a consideration in his introduction of Grillparzer's sensitiveness to aspects of nature, treats in detail of that writer's description of nature and of its interpretation. His conclusion is that Grillparzer's nature poetry is not so much an original conception of nature as an original expression of modern interpretation.

Professor Ford's "Cost of our national government" is made up of the lectures delivered by him in 1909 on the Blumenthal Foundation at this University, with the incorporation in a number of cases in the text of matter, statistical and other, referred to but not fully quoted in the oral exposition. In revising the lectures the author has also included references to pertinent events that have taken place since the lectures were delivered, so that the book is timely and thoroughly in accord with existing conditions. The sub-title of the book: "A study in political pathology," indicates the particular intention of the author. The various chapters in detail are: The growth of expenditure; making the national budget; constitutional agencies of budget control; theory and practice in the United States; some comparisons with other countries; the evolution of the American system; political conditions and tendencies; and the possibilities of improvement. The appendices contain an analysis of public expenditures; the budget procedure in the House of Representatives; and a comparison of executive estimates and congressional appropriations. The book, it will be seen, is of extraordinary interest and value, and should be most useful in clarifying public opinion along lines vastly important to the nation, as the author in his preface piously expresses his hope may be the case.

The new edition of Professor Munroe Smith's "Bismarck and German unity" reprints, in the main, the original text. A number of pages, however, have been added, in order to note and characterize the more important books which have appeared in the twelve years since the issuance of the original volume. There is also added an essay on "Bismarck as a phrase-maker."

In the press at the present time, and in a number of instances destined for immediate publication, are the following: "The bellum civile of Petronius," by Florence T. Baldwin, in the Studies in Classical Philology; "The Shemoneh Perakim of Maimonides," by Joseph I. Gorfinkle, in the Oriental Studies; "The Dasarupa: a Hindu treatise on dramaturgy," by G. C. O. Haas, in the Indo-Iranian Series; "The influence of Moliere," by Dudley H. Miles, in the Studies in Comparative Literature; "The rise of the novel of manners," by Charlotte E. Morgan, and "John Dennis, the critic," by Harry G. Paul, both in the Studies in English; "Charles de Sainte-Marthe," by Caroline Ruutz-Rees in the Studies in Romance Philology and Literature; and "Karl Lebrecht Immermann: a Study in German Romanticism" by Allen W. Porterfield, in the Germanic Studies. Professor Charles E. Lucke's Hewitt Lectures of 1909–10 will appear early in the year with the title

"Power" in a single volume with numerous illustrations. The "Lectures on Literature," delivered at the University during the last academic year, have been delayed in printing, but will be speedily issued in a single volume from the Press.

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The Berlin Centenary

At the celebration of the one hundredth anniversary of the founding of the University of Berlin on October 10, 11 and 12, 1910, the following address from Columbia to the University of Berlin was presented by President Butler:

Curatores
UNIVERSITATIS COLUMBIAE
In Urbe Novo Eboraco
Rectori Magnifico Senatuique Academico
UNIVERSITATIS FRIDERICAE
GUILELMAE BEROLINENSIS
S·P·D·

Litteras nuper accepimus quibus ad prima saecularia sollemnia Universitatis Berolinensis celebranda invitamur. Quare vobis, viri doctissimi atque illustrissimi, merito et gratias agamus et de prosperitate Academiae vestrae ferias natales celebrantis gratulemur velimus. Nobis periucundum est hanc ad vos scribendi occasionem amplecti quod Academia vestra studiorum humanitatis et litterarum amantissima atque clarissima omnium artium liberalium splendore omnibus qui ubique sunt laudanda est. Cum enim multi crediderint nihil esse potentius auro, ut est apud Ovidium poetam, vos semper praecepistis, ut verbis Quintiliani utamur, quanta sit humani ingenii vis quam potens efficiendi quae velit.

Sunt vero multa necessitudinis vincula quae Universitatem vestram cum omnibus trans Oceanum Atlanticum Universitatibus feliciter coniungunt; etenim, ne plura commemoremus, multos discipulos Americanos in tutelam vestram libenter excepistis ut ne recordari quidem possimus quot professores qui nunc in Academiis nostris magnis muneribus fungantur in vestra instituti sint. Sed non modo in nos sed etiam in omnes summa contulistis beneficia. Nam unum per saeculum—iuvat in memoriam revocare,—apud vos quot et quanti viri eruditissimi litteras humaniores et scientiam illuminaverunt, in historia Niebuhr, Rankius, Ernestus Curtius, Mommsenius; in philosophia Fichte, Hegelius, Trendelenburgius, Zeller; in studiis philologis Boeckhius, Boppius, Lachmannus, Carolus Zumptius, Hauptius; in physicis Helmholtzius; in theologia Neander, Schleiermacher, ceterique quorum nomina insignia per orbem terrarum nota sunt.

Quarum rerum non immemores cum Nicolaum Murray Butler, Ph.D., LL.D., Litt.D., Universitatis Columbiae praesidem ad saecularium illorum partem capiendam vocaveritis cum legatum maxime idoneum constituere decrevimus, qui feriis vestris saecularibus interfuturus hanc epistolam ad vos perferat.

Dabamus Novi Eboraci Idibus Septembribus A. S. MCMX.

GEORGIUS L. RIVES
Curatorum Magister

JOANNES B. PINE
A secretis

* * *

Honorary Degrees

In connection with the centenary celebration of the University of Berlin the University conferred the degree of doctor of philosophy, *honoris causa,* upon Bailey Willis, E.M., C.E. '78. At the same celebration the degree of doctor of laws was awarded to Dean John W. Burgess. At its Commencement in June, St. John's College, Maryland, awarded the degree of doctor of laws to Marcus Benjamin, Ph.B. '78.

The Kaiser conferred on President Butler the order of the Red Eagle of the first class with the star, the second highest decoration in the empire. This honor was conferred in recognition of President Butler's services in connection with the Roosevelt-Kaiser Wilhelm exchange professorships.

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Columbia Representatives

Charles H. Fulton, '97, president of the South Dakota State School of Mines, represented Columbia at the installation of Frank Le Rond McVey, Ph.D., LL.D., as president of the University of North Dakota, in September, 1910.—At the inauguration of William Preston Few as president of Trinity College, Durham, North Carolina, on November 10, 1910, Columbia was represented by George B. Pegram, Ph.D., assistant professor of physics.—Victor Rosewater, '91, editor of the Omaha Bee, represented Columbia at the inauguration of Luther Freeman, D.D., as president of Morningside College, Sioux City, Iowa, on October 19.—At the inauguration of Marion LeRoy Burton, D.D., as president of Smith College, in September, Columbia was represented by Professor William Tenny Brewster, Acting Dean of Barnard College.—Professor Brewster, together with Marie Reimer, adjunct professor of chemistry in Barnard College, and Ida H. Ogilvie, tutor in geology in Barnard College, also represented Columbia at the celebration of the twenty-fifth anniversary of the founding of Bryn Mawr College on October 21 and 22.—Professors William H. Carpenter and Calvin Thomas represented the University at the annual meeting of the Association of American Universities, which was held at the University of Virginia on November 10 and 11.—Dr. George E. Brewer, professor of clinical surgery in the College of Physicians and Surgeons, and William H. Wooglam, M.D., were Columbia's representatives at the International Congress for Cancer Research held in Paris in September.—Dr. George S. Huntington, professor of anatomy, represented the University at the Second International Anatomical Congress held at Brussels, Belgium, during the summer.

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Miscellaneous

Professor Edward T. Devine was a member of the American Delegation to the International Conference on Unemployment which opened in Paris on September 19.

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Alumni Scholars

The generous offer made by President Butler last fall that he would make himself personally responsible for the amount needed to provide an annual scholarship covering one year's free tuition to be awarded on the nomination of the duly qualified out-of-town Alumni Associations met with an enthusiastic response. All the associations availed themselves of the President's offer. The alumni scholars for the year 1910–11 are: California, Selin E. Woodworth; Colorado, George S. Patterson; District of Columbia, Richards Hale; Illinois, Wm. B. Langford; Indiana, Birl E. Shultz; Kansas City, Walter F. David; Mexico, Hugo Moss; Minnesota, Lyman M. Kells; New Jersey, Hugh Smith Rice; Northern New York, Calvin E. Bridges; Philadelphia, Howard W. Nudd; Pittsburgh, Milton Meyers Allison; St. Louis, A. P. Meyer; Washington State, Charles R. Fettke; Western New York, G. Raymond Webb; Wisconsin, Urban F. Peacock; Yonkers, Frank H. Simmonds.

The College Alumni Catalogue

The long delayed catalogue of graduates and former students of Columbia College has finally appeared from the press and is now ready for distribution. It is a paper bound volume of 256 pages with an index. The book contains a total of 7,254 names, of which 4,494 are of graduates, 2,638 of non-graduates and 122 of graduates in political science. The addresses are the latest obtainable, and many of them, particularly of the non-graduates, were difficult to secure. This volume containing as it does the only collected list of non-graduates will be peculiarly valuable for reference.

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Campus Improvements

One Hundred and Sixteenth Street is being improved by the planting of forty-eight European linden trees, twenty-four on either side of the street. The ground around the trees between the brick walk and the curb has been removed to the depth of three feet and replaced by a rich loam. The trees are spaced eighteen feet apart and extend from South Court to Amsterdam Avenue and to Broadway.

SCHOOL AND DEPARTMENT NOTES

Architecture—Teachers College—Anatomy—Botany—Chemistry—Chinese—Classical Philology—Economics and Social Science—Electrical Engineering—English and Comparative Literature—Genito-Urinary Diseases—Geology—Germanic Languages—History—Indo-Iranian Languages—Law—The Library—Mathematics—Mineralogy—Music—Neurology—Ophthalmology—Philosophy—Physical Education—Physics—Physiology—Psychology—Romance Languages.

School of Architecture

The School of Architecture has again begun a new year, with a large increase in registration. The new students number 72, and the total registration, standing at 156 at the end of October, has already exceeded the total figures for last year. A continuance of this growth will necessitate a material enlargement of the staff and equipment of the School, and a new building will be absolutely necessary in the near future.

The course in landscape art has at last become a reality. The School of Architecture announces the establishment of a curriculum in landscape art leading to a professional certificate, and so soon as the University Council shall have determined the character and designation of the baccalaureate degree in landscape design a course leading to this degree will be also announced by the School. The specific technical instruction in the history and theory of landscape gardening and in landscape design will be given for the coming year by honorary lecturers appointed by the American Society of Landscape Architects. These lecturers are Mr. C. D. Lay, a former student in the School of Architecture and a graduate of the Harvard course in landscape architecture; Mr. Ferruccio Vitale; and Mr. H. C. Caparn, also a former special student at Columbia. All three of these gentlemen are landscape artists of high reputation and wide experience.

The Year Book issued last year by the students constituting the Architectural Society of the School has received high compliment from several of the European organizations to whose libraries complimentary copies were sent; among them the Royal Institute of British Architects.

Mr. Ludlow, having resigned his position as lecturer in architecture to accept an appointment as associate professor of architecture in McGill University, Montreal, his place has been filled by the appointment as Lecturer of Mr. Richard Franz Bach, A.B., who has special charge of French archæology, French and German research and theory of the decorative arts.

Professor Hamlin has assumed the courses formerly given by Professor Kress and later by Mr. Ludlow in ancient architectural history and in ancient ornament. He has given up the courses in theory of architecture, (planning, composition, color, and professional practice), which will be given by members of the Committee on Design who conduct the respective ateliers of the School, and by architects in practice in the city under the direction of a special committee on lectures. The policy of bringing practising architects, both graduates of the School and others, and the undergraduates of the School into direct contact in the lecture room has always proved highly successful, giving inspiration to the students and imparting a vital interest to the instruction which can be secured in no other way. The readiness of practising architects to respond to these invitations is most gratifying, and it is believed that the adoption of this policy on so large a scale will produce interesting results.

Professor Hamlin spent the last summer in Europe, re-visiting Constantinople, where he superintended the laying out of the foundations for the first of the new buildings to be erected with the Kennedy bequest, and also made extensive studies for the improvement of the original design of a year ago for the lay-out and architectural development of the superb property of the college on the shores of the Bosphorus. With the assistance of Professor C. P. Warren as his associate, Professor Hamlin is planning other buildings to be added as soon as possible to the growing group of the College.

Professor Sherman, who was absent on leave during the second half of the last academic year, has returned to his post in greatly improved health.

Mr. William A. Delano, who has conducted the Columbia Atelier ever since its establishment in 1904, has been obliged by ill-health to resign his post, very much to the regret of his associates in the School. It is hoped that he may be able to continue to serve the School from time to time in the judgments on design problems. Mr. Maurice J. Prévôt has been appointed to the vacancy resulting from Mr. Delano's resignation.

News from Professor W. R. Ware, founder of this School and since 1903 Professor Emeritus of Architecture, is to the effect that he has been in feeble health during the past winter and summer, but is now stronger. His interest in the School and his mental activity continue unabated. He has presented the School with files of the Journal of the Royal Institute of British Architects for several years past.

Mr. Richard H. Smythe, a member of the class expecting to graduate in 1911, was the winner of the competition for the Roman Fellowship in Architecture offered by the American Academy in Rome for the academic year 1910–1911.

Teachers College

The registration shows an unprecedented increase of about thirty per cent. over last year's attendance. There are now in residence nearly four hundred more students than at this date last year and one hundred and fifty more than last year's entire registration, including the considerable number who entered in February. The increase is very evenly distributed throughout all the departments of the college, although the increase in the schools of Household and Industrial Arts is especially large. The new students include Chinese and Mexican government scholars and the first incumbent of the Isla Stewart scholarship which will hereafter place in Teachers College each year a graduate of Saint Bartholomew's, the oldest hospital school in England.

The general education departments of the college are offering an interesting group of new courses. In the history of education the offering is unchanged but in the philosophy of education Professor John Dewey is giving a new practicum in the relations of philosophy and education, and in educational sociology Professor Henry Suzzallo, a new study of the public school and democracy. Professor Strayer is giving a course in the organization and administration of school systems in general, and a practicum in the administration of public education in the United States. Professor Farrington is giving two courses in comparative education during first half-year. The second half-year he will spend in Europe in educational investigation and in directing the investigation of a group of travelling fellows and scholars. This plan for late and thorough study of foreign education has just been inaugurated. In educational psychology two new courses are being given, in one the psychology of the elementary school subjects by Professor Thorndike and a course in the applications of experimental and physiological psychology to education by Professor Henry Ruger, who has been appointed from Colorado College.

The classes provided at hours convenient for part time students have been increased by a course in the applications of experimental physiological psychology to education to be given by Professors Norsworthy and Ruger on Tuesdays and Thursdays at 4:10.

The Trustees have established a group of new fellowships and scholarships. A foreign research fund is established for travelling fellowships to be awarded annually to advanced students of Teachers College, or similar institutions, for the investigation of European education under the direction of the Professor of Comparative Education, Dr. F. E. Farrington, who will be in Europe during one half of each academic year. These travelling fellowships may be applied for by any college graduate, who has had training and some experience in educational investigation. The first award will be made in December. Recipients will accompany Professor Farrington abroad in February.

At the same meeting the Trustees announced the establishment by an anonymous donor of several new scholarships to be awarded annually to students from foreign countries, preferably those who have already been officers and teachers in mission schools and colleges.

The psychological laboratory has completed an extensive series of experiments resulting in new views concerning mental images of sight, hearing, touch, taste, smell, muscular and general organic sensations. Contrary to general belief, visual imagery did not equal the others in clearness and vividness. No connection was found between imagery and ability to study. No foundation was discovered for such classifications as 'eye-minded' and 'ear-minded'; and no justification for systems of teaching based upon appeals to particular kinds of imagery.

The department of secondary education has issued a series of stenographic reports of actual lessons in English, German, history, mathematics and domestic science as given in various New York high schools. Such reports of the actual procedure of teachers and pupils in actual recitations with introductory and critical comments appended have proved so useful to students at Teachers College that the College desires to indicate their suggestiveness to a wide circle of readers.

A free public course of weekly lectures on Health Protection is being given on Mondays in the Auditorium of the Horace Mann School by Dr. Soper of the Metropolitan Sewerage Commission, Commissioner Lederle, Dr. Knopf and Dr. Park of the City Health Department, Director Flexner of the Rockefeller Institute, Secretary Veiller of the National Housing Association, Secretary Farrand of the National Association for the Study and Prevention of Tuberculosis, and Professor Miller of the College of Physicians and Surgeons. The lectures deal with the milk supply, clean streets, healthful housing, disposal of waste, the control and prevention of communicable diseases, and the relation of teachers and citizens to such problems, and are open to all who are interested, without cards.

The School of Industrial Arts is providing 44 evening technical courses for teachers of technical subjects and in public and trade schools and for all others who are interested in industrial education. The courses cover the fields of industrial arts education; drawing, design and construction; industrial mathematics, wood-working, metal working, textiles, chemistry, electricity, physics, photography, plant management and commerce. The School of Household Arts is offering 34 similar evening and special classes in its field.

The latest annual report of the Appointment Committee for 1909–10, shows the location of 715 graduates and former students in response to 2,907 requests to the Committee.

Department of Anatomy

The research work of the department of anatomy has developed considerable activity during the past year. A number of important investigations has been completed in their main chapters and published. The chief subjects of research have been the morphology and development of the salivary apparatus and the development of the mammalian lymphatic system. The latter subject is one of the few remaining broad morphological problems as yet incompetely solved and has hence attracted wide attention both in this country and abroad. The results obtained in the investigations of this laboratory now extending over six years promise to be conclusive and were presented by Dr. Huntington at the Second International Anatomical Congress held in Brussels August 4–10 of this year and at the Eighth International Zoological Congress, which met in Graz, August 15–20. Correlated investigations on the lymphatic genesis in vertebrates below the mammalia are at present in active progress. Mr. Miller has nearly completed the developmental analysis of the jugular lymph sacs in the bird. Dr. Huntington is engaged on the development and morphology of the lymphatic system in reptiles and Dr. Tilney has just completed a study of the development of the venous and lymphatic systems in the aberrant ungulate Tragulus. Dr. Tilney has further completed an extensive research on the comparative histology of the hypophysis, and Dr. Schulte one on the development of the salivary complex in mammalia. Dr. Brown is engaged in a comparative and developmental study of the connections between the portal and systematic veins in vertebrates. Altogether the promise for an active and productive year is exceedingly good.

It is now a year since the sub-department of histology and embryology was merged in the department of anatomy under the charge of Dr. Schulte. From the didactic standpoint the closer correlation of teaching between the several branches of morphology has proved of distinct advantage. The separation in widely distant portions of the building of student laboratory, staff laboratories, lecture and demonstration rooms is however inconvenient and embarrasses student and instructor alike. The course as now administered comprises in order, cytology, general embryology, histology, organogenesis and minute anatomy. The method of teaching the development of an organ combined with the study of its adult structure, in the gross as well as in microscopic detail, has been found to afford students a better general understanding of the various organs and systems than the method formerly in use, when minute anatomy, embryology and gross anatomy were, of necessity and not choice, taught as separate and unrelated subjects. We are informed that a similar didactic union of histology and embryology has this year been introduced at Yale.

The instruction in neuro-anatomy has now been organized, under the charge of Dr. Tilney and Dr. Strong on a similar basis. Here again the student approaches his subject from the standpoint of development, and later studies the several divisions of the nervous system in detail, using dissections and microscopic preparations in the same exercise and under the same instructors.

Department of Botany

The present academic year opens with the record attendance in the history of the department. There are at present enrolled 150 students in the various courses and with the additions that may be expected in February the total attendance for the year will approximate 170. Of this number 119 are undergraduates and 27 are candidates for the higher degrees with 14 electing their major subjects in botany. In view of the fact that the courses in botany, save a course for one semester for civil engineers, is entirely elective, it may be stated that Columbia's record in botany is the equal of any in the country.

Dr. LeRoy Abrams who received his doctorate in botany from Columbia last June has been appointed assistant professor of botany in Leland Stanford Jr. University.

The second edition of "The nature and development of plants" was issued in August by Henry Holt & Company. This book covers the work given at Columbia in Botany 1–2. It has been compiled through the co-operation of the officers of the department and represents the character of the instruction that is offered in the first year's work. It is gratifying to state that this book has been adopted by several universities and colleges.

DEPARTMENT OF CHEMISTRY

Professor Chandler has retired from the active direction of the work of the department, and Professor Bogert has assumed charge as administrative head.

The rapidly growing number of students taking courses in chemistry, particularly as candidates for higher degrees, has not only filled the regular laboratories, but has overflowed into all parts of the building.

The demand for our graduates, particularly for those who have received our Ph.D. degree, continues far in excess of the supply.

General and Industrial Chemistry

The lectures in General Chemistry 3–4 will, in the future, be given in somewhat different form, presupposing a complete fundamental knowledge of entrance chemistry and physics. The first three months of the year will be devoted to a rapid but thorough review of the chemistry of common gases. The balance of the year will be devoted to a more detailed discussion of the chemistry of the metals, especially considered from a systematic organization based on the periodic law. This work is so arranged as to correlate as far as possible with the work in qualitative analysis, and the recitation work in Chemistry 3–4 is being conducted in part by qualitative instructors. Furthermore, the recitation work is being held more closely to the ground covered by the lectures and each recitation officer is promptly supplied with a syllabus of each lecture immediately after it is delivered, which syllabus serves as a guide for him in his recitation work.

Chemistry 81–82 (industrial chemistry), taken by all engineers and a considerable number of College men, is being given with a view to offering a general descriptive knowledge of the more important industrial subjects.

Chemistry 97, which was formerly a course of chemical factory design and location, has been changed to a course of lectures on chemical factory operation and management.

The industrial chemistry laboratory courses have been modified to meet the more essential and typical requirements of a study of the principles involved in the more common processes of manufacture. This work is being developed along these lines as rapidly as our facilities will permit, and it is hoped in the near future that considerable new apparatus may be added to this laboratory to illustrate typical principles.

Physical Chemistry

The research laboratory in physical chemistry has been open all summer, and has been occupied by four graduates. Owing to the fact that nine graduates have registered for major work in this subject, it has been necessary to set aside a portion of the undergraduate laboratory to accommodate them. Of these nine, five are candidates for the degree of Ph.D. in June, the others for the A.M. All of these students are continuing the work of Morgan and Stevenson and Morgan and Higgins on the weight of a falling drop and the laws of Tate—using for the purpose the simplified apparatus designed by Professor Morgan, and testing the laws already found or finding new ones.

In all, 71 students are receiving instruction, of whom 30 are postgraduates.

Electrochemistry

A paper on the electrolytic production of magnesium by S. A. Tucker and F. L. Jouard was read at the Pittsburgh meeting of the American Electrochemical Society in May. Some excellent commercial samples of silundum have been received from F. Bölling, Frankfort a/M., Germany.

The new vacuum electric furnace made by the General Electric Company has been installed and will prove a most useful addition to the equipment of the laboratory.

The paper on a comparison of the methods for depositing iron electrolytically, by S. A. Tucker and E. Schramm, was published in the June number of the Journal of Industrial and Engineering Chemistry.

The research on the action of nitrogen on strontium carbide will be continued and work is now being carried on on the estimation of temperatures in the electric furnace under diminished gas pressure.

Analytical Chemistry

During the summer Dr. W. C. Moore, instructor in qualitative analysis, received the degree of Ph.D., from the University of Chicago. E. C. Kendall, Ph.D., 1910, has accepted a position in the research laboratories of Parke, Davis & Co., and E. M. Flint, A.M., 1910, has been appointed assistant chemist in the research laboratory of the department of agricultural chemistry, University of Wisconsin.

The beginning of a new academic year finds the analytical laboratories even more crowded than in previous years. Every desk is assigned and twenty students for whom there are no desks in the quantitative laboratory are working in other parts of the building at considerable inconvenience to both students and instructors. This crowding of the laboratories is chiefly due to the constantly increasing numbers of students in mining and chemical engineering. Major work is also being carried on in this branch of the department by five candidates for the degree of Ph.D., and six for the degree of A.M. Among the more important of the researches in progress in the analytical laboratories may be mentioned those of Dr. Metzger on new methods of inorganic analysis, Dr. Zanetti on the effect of high pressures on organic compounds, and Professor Sherman on the determination of diastatic power and the purification and properties of the amylases.

DEPARTMENT OF CHINESE

During the year preceding the present one (1909–1910) ten students attended the courses offered by the department. Of these five joined the elementary class, two were seniors engaged in seminar work, one was allowed to study in the seminar for Chinese Art.

The elementary course, designed to furnish a foundation for the study of the Chinese written language, has since the opening of the department been chiefly attended by theological students intending to go to China as missionaries, or other students wishing to prepare for work in China as teachers, engineers, etc. A number of former students of the department has since worked their way to positions in which the knowledge of Chinese is indispensable To these certain new classes have been added within recent years. The kind of student who registers for elementary Chinese just for the pleasure it gives him, or as one who is now a practical business man represented it, "to widen his horizon," may occur in very small numbers, but he is already a standing feature.

Another new class of student has come forward quite recently from a quarter whence it was least expected. The efforts made to attract to this University a large share of the students sent by the Chinese government to the United States by the issue of a pamphlet in Chinese setting forth the advantages of studying in Columbia University has resulted in an influx of Chinese students much in excess of that of former years. It is obvious that the existence of a Department of Chinese is an advantage to those natives of China who may wish to keep up familiarity with their national literature. The novel feature in the present year is a demand on the part of native Chinese for instruction in their own spoken language. Three natives of Canton, or sons of Cantonese born abroad, who speak only their Canton dialect, have registered for the beginner's course in the Chinese Mandarin dialect, to be familiar with which is incumbent on all the government officials and will be the sine qua non of the parliamentarian that is to be in China.

The present list of registered students contains thirteen students, all of whom study, or know, the language and six of whom are Chinese.

During the past year Professor Hirth delivered two public lectures, one on "Chinese Literature" in connection with a series about to be published by the Columbia University Press, the other on "Confucius and the Chinese," published in Randall and Smith's volume "The Unity of Religions" (New York, Thos. Y. Crowell & Co., 1910). His research work has been devoted lately to the subject of Chinese contemporaneous records concerning the Asiatic portions of the Roman and Byzantine empire in continuation of his former work "China and the Roman Orient" and the elucidation of facts connected with the migration of nations as far as it can be traced in Chinese literature. His translation of a Chinese work by Chau Ju-kua, during the thirteenth century an inspector of foreign trade in Marco Polo's city of Zaitun, who collected valuable information, based on the reports of Arab and Persian travellers, on the condition and trade of the various nations engaged in the Arabic ocean trade from Corea and Japan in the east to Morocco and Spain in the west, has been revised and annotated, and will be published conjointly with the Hon. W. W. Rockhill, now U. S. Ambassador to Russia. The work will be printed by the Imperial Academy of Sciences in St. Petersburg, of which Professor Hirth is a foreign member.

DEPARTMENT OF CLASSICAL PHILOLOGY

A committee consisting of Professor Wheeler as Chairman and Professors Lodge and Perry has completed arrangements for a course of ten lectures on Greek literature and its permanent influence (the exact title is yet to be determined), to be given on Tuesday and Thursday afternoons, beginning about February 28, 1911. Some of the lectures will be given by members of the faculty of Columbia University, but most of them by scholars from elsewhere.

At the last meeting of the N. E. A. in Boston, July 8, Professor Lodge addressed the Round Table in Latin on the subject of "The oral teaching of Latin" in which he set forth to a very interested audience the principles that govern the new method of presenting Latin to beginning students. On October 28, he was also the guest of the Essex County Teachers' Association at their eighty-first meeting, held at Peabody, Mass., and addressed the Latin section on the same subject.

Professor Young spent about five of the seven months of his recent sabbatical leave in the lands most famous for remains of Greek civilization: Sicily, Greece, and Western Asia Minor. The present activity of the French excavators on the island of Delos was found to be particularly interesting and rich in results; in particular, it laid bare the best example hitherto found of a real Greek town, supplying on that side a most interesting pendant to Pompeii. Professor Young secured over a thousand photographic negatives of Greek scenes.

The archæological collection of the department has been enriched again this year by a number of interesting objects obtained in Italy during the past summer by Professor Olcott. Our collection is not intended as an "art-collection," but as a laboratory for students of ancient life and customs. The fine arts are sufficiently within reach of our students in the galleries of the Metropolitan Museum. It is the homelier arts of war and peace that are represented in the new acquisitions here. From the iron-age, contemporary with, or earlier than, the traditional founding of Rome, comes a curious large bronze *fibula,* or safety-pin, with a crescent-shaped razor-knife attached, which Professor Olcott saw upon the breast of a skeleton when taken from its tomb near Leprignano, not far from the ancient Capena. The two objects, in which the deceased had taken such pride during his life in the eighth century before Christ, had been carefully strung together and placed upon his body. A stiff bronze statuette of Egyptian style represents early eastern influence in Etruria; it dates from about the sixth century B.C. For the Osco-Grecian civilization of the towns in the neighborhood of Naples, we have barbed and unbarbed lance-tips of iron and bronze, a large iron door-key of complicated pattern, and a smaller one of bronze; while from Rome itself come a fine bronze spear-head ten inches in length, a number of clay lamps with designs in relief and makers' stamps, and a heavy iron woodchopper's axe. Of a much later period (third or fourth century) is the bone handle of the clasp-knife of a Roman circus-charioteer, decorated with homely carvings: a horsehead and the palm-branch of victory, with the names *Tertulio* and *Asulius,* and terminating in a ram's head. This was found last summer near the Appian Way, not far from the Catacombs of St. Sebastian. And lastly we have a very interesting group of Roman surgical and pharmaceutical instruments in bronze, comprising knives and scalpels, probes, *spathomeles* ("Löffelsonde"), *ligulae,* spoons for measuring and preparing medicaments and the like, single or in combination. Quite unique of its kind is a silver instrument, 10½ inches long, with a scalpel at one end and a curious bifurcated probe at the other. It seems to have served for opening a flesh wound made by a barbed point, and extracting the barb.

Departments of Economics and Social Science

The new year opens with a largely increased attendance in economics. The course in Economics 1 is about 50 per cent. larger than last year, there being approximately 130 enrollments. The attendance in the graduate courses is much larger than last year and the applicants for admission to the seminar are so numerous that it has been found necessary to have two seminars this year; one primarily for the candidates for the degree of Ph.D., which is being conducted by Professors Seligman and Seager, and the other for the candidates for the degree of M.A., which is being conducted by Professors Simkhovitch and Mussey. Professor John B. Clark is away for the year on leave of absence. Professor Henry L. Moore has returned from his year's leaves of absence and is taking charge of the statistical laboratory.

The Macmillan Company announces the publication of a work by Professor Seligman on "The income tax" for this winter. The French translations of his "Economic interpretation of history," as well as his "Incidence of taxation," have just appeared. Professor Seager's book on "Social insurance" was published during the summer. Professor Seager is still sitting on the Committee of Employers' Liability and Unemployment which made so noteworthy a report last spring and which is continuing its investigations. Mr. Leiserson, one of the graduate students in the department, spent the summer abroad as a special agent for the Committee.

Professors Seligman and Seager testified during October before the New York City Committee on Congestion.

The quarters of the department of economics in Kent Hall are spacious and attractive. In the large seminar room are hung about seventy-five engravings and etchings of the leading economists of all countries. The walls of the departmental rooms as well as the consultation rooms are hung with Piranesi etchings and the furniture is both aesthetic and comfortable. An interesting feature of the seminar rooms in Kent Hall consists in the curators or student assistants that have been provided by the trustees. The seminar rooms are to be used as reading and lounging rooms for the students between lectures, and the shelves contain not only a good collection of the books needed in each course, but also the latest number of the important periodicals. Provision has been made for a kitchenette so that tea and light refreshments can be served and it is hoped that the room will be used frequently for meetings of a purely social character. A reception will be given in Kent Hall in January by the Faculty of Political Science.

The Political Economy Club, composed of candidates for the higher degrees, elected the following officers: President, Mr. Leiserson of Wisconsin. Vice-president, Mr. Anderson of Missouri. Secretary-Treasurer, Mr. Streightoff of New York. Both public and private meetings will be held during the winter.

An undergraduate Political Economy Club has also been formed out of students taking Economics 1 and 2. This is under the special supervision of Dr. Agger.

The thirtieth annual meeting of the Academy of Political Science took place at Columbia, November 11th and 12th. It was a national conference on the currency problem and was conducted with the co-operation of the Chamber of Commerce and the New York Merchants' Association.

Reverend Dr. Warren H. Wilson, whose doctor's dissertation in Sociology on "The history and social organization of Quaker Hill, New York" created a remarkable interest in the possibilities of organizing the work of a country parish on sociological lines, has been made general superintendent of a new department created by the Presbyterian Church of the United States, to be known as the "Department of Church and Country Life." Dr. Wilson is becoming acquainted with the present day conditions of parish work in all sections of the United States, and especially of the middle west and south.

Dr. A. A. Tenney is arranging the details of the program of the meeting of the American Sociological Society at St. Louis in December. The presidential address by Professor Franklin H. Giddings will be upon "The relation of social theory to public policy."

DEPARTMENT OF ELECTRICAL ENGINEERING

Last June, through the kind efforts of Professor Pupin, a friend presented to the department of electrical engineering, the sum of $5,000, to be spent at the discretion of the officers for the enlargement of the equipment in the department laboratories. In consequence of this, many new and valuable pieces of apparatus were ordered during the past summer and are now being installed.

Professor Francis B. Crocker, on leave of absence, spent the greater part of last year in a trip around the world. During this time, he studied the electrical trade conditions in the Far East and wrote a series of articles upon these which were published in the *Electrical World,* Volume 55, Nos. 13, 15, 16 and 17. During Prof. Crocker's absence abroad, the book "Electric motors, their action and control" written by him and Professor Arendt was published by the D. Van Nostrand Company of New York.

Professor George F. Sever, on leave of absence for the year 1910–11, has been for some time past Consulting Electrical Engineer to the Department of Water Supply, Gas and Electricity of the City of New York. He has been most actively engaged in the important electrical problems confronting the City, among which may be mentioned the development and installation of a number of electrically operated high pressure fire pumping stations. Professor Sever has been appointed Chairman of the "Committee on Meetings and Papers" of the American Institute of Electrical Engineers.

Walter Irvine Slichter, E.E. 1896 Columbia, for fourteen years a member of the engineering staff of the General Electric Company, and until recently technical assistant to the Vice-president (E. W. Rice) and a member of its Consultisg Staff was appointed professor of electrical engineering on July 1, 1910. Professor Slichter is an active member of the American Institute of Electrical Engineers and is a member of its High Tension Committee.

Morton Arendt, E.E. 1898 Columbia, formerly instructor in electrical engineering was promoted to assistant professor of electrical engineering last July. For several years Professor Arendt has been associated with the Electro-Dynamic Company, Consolidated Railway Axle-Light and Power Company, and The Holland Submarine Boat Company and this summer he was appointed their advisory engineer.

J. Harold Morecroft, B.S., E.E. Syracuse 1904, formerly instructor in electrical engineering was promoted to assistant professor of electrical engineering last July. Professor Morecroft's field of activity is especially in the experimental or laboratory division of instruction and he has been given general supervision of this important work by the department.

The contract between the University and the Department of Water Supply, Gas and Electricity of the City of New York which was entered into about four years ago is still in force. This contract calls for the testing of electrical meters, new electrical appliances, etc., by an officer of the department of electrical engineering. Mr. Mason has been appointed test officer representing the department.

The Electrical Engineering Society of Columbia University conducted under the supervision of the officers of the department has entered upon its seventh year. The officers for this year are J. C. Hale '11, President; H. L. Mellen '12, Vice-president; F. R. Keller '11, Secretary and H. S. Herzog '11, Treasurer.

Department of English and Comparative Literature

The present registration in the graduate courses shows an enrollment of 491 in the 21 courses and of 60 in the 5 seminars. It will be noted that this is an average registration of 21 students for each course. All of these courses and seminars are open only to graduate students. There are 176 students taking English or Comparative Literature as a major and 67 taking it as a minor subject. The enrollment in the two English graduate courses in the summer session showed an attendance of 82 students. These figures show a large increase over any previous registration.

The following former students have been recently appointed to the positions stated: Victor E. Albright, Ph.D. 1909, instructor, University of Wisconsin; Colin C. Alexander, A.M. 1907, head of English department, Muhlenberg College; Albert Blohm, A.M. 1909, instructor, Georgia School of Technology; Minnie L. Bollert, A.M. 1906, assistant, Teachers College; Ida M. Bradford, graduate student, 1909–11, substitute in English, New York City Normal College; Hugh H. Caldwell, graduate student, 1909–11, lecturer, extension teaching; Frank W.

Chandler, Ph.D. 1898, assistant professor, University of Cincinnati; Jane E. Crowe, A.M. 1910, instructor, Simmons College; Harry F. Harrington, A.M. 1909, assistant professor, Ohio State University; Jessie L. Hart, graduate student, 1909–10, teacher, Tudor School, Indianapolis; Ruth Hutchinson, A.M. 1909, instructor, College for Women, Western Reserve University; Ludwig Lewisohn, A.M. 1903, instructor, University of Wisconsin; Florence A. McDowell, A.M. 1910, teacher, Wadleigh High School; Anna I. Miller, A.M. 1910, instructor, Parsons College; Charlotte E. Morgan, Ph.D. 1910, instructor, Rockford College, Ill.; Arthur H. Nason, graduate student, 1903–09, instructor, Union Theological Seminary; Florence M. Nicholson, graduate student, 1909–10, instructor, Missouri Wesleyan College; Sarah R. Parks, A.M. 1910, professor, Lebanon College; Frank A. Patterson, A.M. 1907, lecturer, extension teaching; Ailsie K. Powel, graduate student, 1909–10, instructor, Grenada College; Ruth W. Richardson, A.M. 1910; charge of English department, Elizabeth College, N. C.; Dora M. Rounds, A.M. 1910, teacher, Washington Irving High School; Charles W. Snow, A.M. 1910, instructor, Williams College; Florence M. Smith, 1908, instructor, New York City Normal College; Samuel M. Tucker, Ph.D. 1908, professor, Polytechnic Institute of Brooklyn; Alfred H. Upham, Ph.D. 1908, associate professor, Bryn Mawr College; Thomas H. Wade, A.M. Columbia 1909, instructor, Delaware College; Ethel G. Ward, graduate student, 1909–10, teacher, Wenatchee High School, Washington; Blanche C. Williams, A.M. 1908, instructor, New York City Normal College.

Mr. Allan F. Westcott discovered last summer, in the British Museum, a manuscript containing a large number of hitherto unpublished poems by James I, king of England. Although the existence of this manuscript was at one time known to scholars, it had been lost sight of. Mr. Westcott expects to publish the manuscript with notes and an introduction.

Among recent publications by members of the department may be noted Professor Brander Matthews' "Molière"; Professor Trent's "Longfellow and other essays"; Professor Erskine's "Some American novelists"; and Professor A. H. Thorndike's chapter on Ben Jonson in Volume VI. of the Cambridge History of English Literature.

The Hewitt Lectures this year are to be given by Professor William Witherle Lawrence. The subject of the course will be "Social ideals in popular story."

DEPARTMENT OF GENITO-URINARY DISEASES

This department has long felt the need of a specially trained assistant to carry on the pathological, bacteriological and research work, but until only recently has it been possible to detail any of the regular assistants for this work. Now, however, on the return of Dr. J. B. Stein from abroad, this branch of the work will be carried on in a more efficient manner than has heretofore been possible. Dr. Stein, while in Germany, devoted a great deal of attention to the study of syphilitic diseases along the lines of research work which have lately been productive of such important results, and it is confidently expected that the department will be greatly benefited by his services. The material for Dr. Hayden's clinics, at Bellevue Hospital during the past session was abundant, so that students were able to see a considerable amount of genito-urinary surgery, post-operative treatment, and bed cases. It is hoped to enlarge Dr. Reynolds' practical course on methods of diagnosis and treatment, so that endoscopy and cystoscopy may be more fully covered than is possible in the limited time allowed for the regular section work at present. Additions are constantly being made to the pathological and other collections. A cabinet containing the various medical preparations commonly employed in this department has recently been installed.

DEPARTMENT OF GEOLOGY

At the close of the last University year and during the summer the following graduate students in the department received appointments as follows: A. C. Boyle, Jr., A.M. 1910, professor of geology and mining, University of Wyoming, Laramie; W. L. Barrows, A.M. 1910, instructor in geology, Trinity College, Hartford, Connecticut; Paul Billingsley, geological staff, Amalgamated Copper Company, Butte, Montana; C. N. Fenner, Ph.D. 1910, geophysical laboratory, Washington, D. C.; J. A. Grimes, geological staff, Amalgamated Copper Company, Butte, Montana; E. L. Jones, A.M. 1910, United States Geological Survey, now in Idaho; Victor Ziegler, A.M. 1910, instructor in geology, Pennsylvania State College, Pennsylvania; Miss M. J. Morris, A.M. 1910, and Miss E. A. Moon, A.M. 1910, are instructors in geology in the Normal College, New York City.

Professor Kemp attended the International Congress of Geologists which was held in the City of Stockholm, Sweden, in August, and served as delegate from the Geological Society of America, the New York Academy of Sciences and Columbia University. He was made one of the Vice-presidents for the United States and had a seat in the Council in virtue of this fact. Professor Kemp delivered two addresses, one as the American representative in a group of five who discussed the most important theme of the congress, namely, that relating to the future supplies of ore for the iron industry.

Professor Kemp before the congress participated in a three weeks' investigation of the Archean rocks of northern Sweden, and reached a point well within the polar circle. After the congress he joined another party which visited similar exposures in southern Sweden for ten days. He finally closed his Scandinavian experiences with three days with Professor Brögger of Kristiania, Norway. The collections of the department of geology have been much enriched by these excursions.

Professor Grabau began his half year's leave by visiting Scotland in June and July, where Marcus Goldman, '06 mines, and now of the United States Geological Survey, and T. Quincy Brown, graduate student, joined him. Many courtesies were extended by the Scottish geologists. Professor Grabau then came to the geological congress in Stockholm, serving as delegate from the university. He presented two papers on stratigraphical subjects which were of much interest. Following the congress he participated in a two weeks' excursion over the Paleozoic strata of the mainland and the island of Gothland in the Baltic. Since its close he has been visiting the time-honored localities of the Paleozoic strata in Europe and was last heard from in Bohemia, at the exposures rendered famous by the work of Barrande.

During the summer there appeared the second volume of "Index fossils," an important work in paleontology by Professor Grabau and Professor H. Shimer, Ph.D. '08, now assistant professor in the Massachusetts Institute of Technology. The two volumes afford systematic descriptions with analytic keys of all the American fossils customarily used in the identification of geological formations.

Professor Charles P. Berkey spent the early part of the summer studying with Mr. Barrows, graduate student, a portion of the Wood River District in Idaho. The region is to be used by Mr. Barrows as the basis of geological research. The rest of the summer was divided between the New York State Geological Survey and the New York City Board of Water Supply. Field work was continued on the geology of the Highlands.

Mr. J. E. Hyde, assistant in paleontology, was employed during the summer upon the Ohio Geological Survey, continuing investigations upon the Waverly group, one of the complex members of the Ohio section. The results will constitute a dissertation later.—Mr. D. D. Condit, assistant in geology, was also in the service of the Ohio Survey, continuing work already in progress upon the Conemaugh formation.

Instruction this year in the week of field-work with the third-year mining students and others in the department, was given at South Bethlehem, Pennsylvania. A party of 84 mapped the local quadrangle, and received many courtesies from Professors Miller and Wherry of Lehigh University.

Instruction in the Summer Session at the university was given this year by Professor George I. Finlay, Ph.D. '02, now professor of geology in Colorado College; Mr. A. C. Boyle, Jr., acted as assistant. Between thirty and forty students took the work.

Department of Germanic Languages

Professor Carpenter spent the summer travelling in Germany and Austria. Professor Thomas devoted the summer partly to revising his edition of Goethe's *Faust,* but mainly to work connected with the forthcoming new edition of the Standard Dictionary, of which he is one of the consulting editors. A paper on "The recent progress of the *landsmaal* movement in Norway," read by Professor Thomas during the winter at a meeting of the Columbia Germanic Club, has lately appeared in the Publications of the Modern Language Association. A paper on "The Degree of Master Arts" was read by him at the eleventh annual conference of the Association of American Universities, held at Charlottesville, Virginia, November 10–11. Professor Bagster-Collins is preparing to spend his sabbatical in Germany and will be absent for the half-year, beginning February 1, 1911. He will spend most of his time in research work in Leipsic and Munich.

Professor Rudolf Tombo, Jr., is absent on leave during the first half-year. He is travelling in Germany and is delivering a series of lectures in various academic centers on "American university life." Professor Tombo also carried credentials from the State Department as an official delegate from the United States to the Congress on Higher Technical Education at Brussels in September. During the month of August, Professor Remy delivered a series of five lectures before the Champlain Assembly of the Catholic Summer School on various subjects concerning Germanic legend and literature. His lecture on "Zoroaster and the Avesta" has recently been published by Crowell & Company in a volume entitled "The unity of religions." During the month of November, Professor Braun delivered two public lectures for the Board of Education of New York City on "Nuremberg and the art of Dürer." Mr. Heuser lectured under the same auspices on "German universities" and "The Rhine in history and legend." On October 16, he lectured on "Heinrich Heine" before the German students and invited guests of Wesleyan University. Mr. Porterfield spent the past summer in study in Munich and Paris. Dr. Juliana Haskell also devoted the summer to work at the German universities.

Department of History

Professor Sloane has been granted leave of absence for the current academic year because of trouble that he has been having with his eyes. In place of Professor Sloane's courses Professor Charles D. Hazen of Smith College, is giving a course of lectures on the nineteenth century.

Professor Dunning will be absent on leave during the first half year, but will resume his regular courses at the opening of the second term. A portion of his work is being given by Dr. Schuyler.

Professor Osgood has resumed his duties at the University after a year spent abroad in research in London among the British archives that relate to early American history. His inquiries were confined to the period of the colonial wars (1690–1763) and included an investigation of material in the Public Record Office, British Museum, Privy Council Office, House of Lords, Fulbane Palace, Lambeth Palace, and in the offices for the Society for the Propagation of the Gospel. A thorough examination was made of the papers of the Board of Trade which relate to that period and which are not easily accessible in this country, of the War Office and Admiralty papers, of the loose and uncalendared papers of the Privy Council, of the papers of William Pitt, the Duke of Newcastle, Lord Chancellor Hardwich and other statesmen who were prominently concerned in the events of the time, and of the mass of correspondence which relates to the work of the English Church in the colonies. Every facility and courtesy were offered him by the custodians of these records, and he was able to secure abstracts of nearly everything of importance which is not accessible in the United States. Extended researches must be continued before the collection of material for his projected work on the early eighteenth century is completed.

Professor Botsford, after a year's leave of absence, has also resumed his regular university work. The principal object of his sojourn abroad was to gather archaeological information for use in his courses. For this purpose he visited nearly all the museums of Italy and Greece, as well as those of Munich, Paris, London and Oxford. He spent some time in the study of the topography and monuments of Rome, and visited the sites of several Etruscan and old Italic cities, since he was especially interested in the early Italic civilizations. During the year he made large collections of photographs illustrative of Greek and Roman history. He found his work in Rome greatly facilitated by the American School of Classical Studies. He believes that the establishment of a professorship in ancient history in that institution would be of distinct advantage to American scholarship.

Professor Robinson spent a portion of the summer in Dalmatia and Bosnia, and made a brief visit to Montenegro.

Professor Shepherd acted as Chief Secretary of the Delegation of the United States during the sessions of the Fourth International Conference of American States at Buenos Ayres, Argentine Republic. He was also a delegate of Columbia University to the International American Scientific Congress held in the same city, and spoke in representation of the United States at the opening session. He was made honorary president of the Section of Psychological Sciences and was elected corresponding member of the Argentine Scientific Society under the auspices of which the Congress had been organized. After the close of the Conference he attended the celebration at Santiago of the centennial of Chilean independence and was chosen honorary member of the Faculty of Humanities of the University of Chile.

Professor Shepherd has for some years been engaged upon the very arduous task of preparing an English edition of Putzger's " Historischer schulatlas." With the cooperation of the Leipsic publishers, Velhagen & Klasing, he has completely revolutionized the work by the modification of the original maps and the introduction of new ones. The work now constitutes the most available historical atlas in existence and will prove of great value to both schools and colleges.

The general growth of the College is reflected in the increase of numbers in the introductory historical course. Professor Hayes is assisted by Dr. Schuyler and Mr. Sait in dealing with some three hundred students who are now taking the course. The space on the top floor of Hamilton Hall has been readjusted so as to supply a more adequate historical laboratory.

Department of Indo-Iranian Languages

Two further volumes are soon to be added to the Columbia University Indo-Iranian Series. Volume 7, shortly to appear, will present an English translation of an important Hindu treatise on dramaturgy, the Daśarūpa, together with the Sanskrit text and an introduction and notes, by Dr. George C. O. Haas. A translation of the Vāsavadattā, a Sanskrit novel of the seventh century A. D., by Dr. Louis H. Gray, which is to form volume 8, is now in press.

Professor Jackson returned in July from a third journey through Persia and Central Asia. The material gathered on this trip, including a number of inscriptions of importance, will appear in a book to be published by the Macmillan Company.

Dr. Yohannan has published a book, "The vigil," including some addresses made by him before the students of the University and the members of his Oriental congregation of St. Bartholomew's Church.

Department of Law

The registration in the School of Law indicates an increase in the number of students for the year of about fifty, increasing the total attendance upon the Law School approximately to four hundred.

Sir Frederick Pollack has been appointed to the Carpentier Lectureship for the academic year 1911–12.

Professor Kirchwey delivered an address before the International Prison Congress at Washington in September.

Professors Burdick and Terry, members of the Commission on Uniform Laws appointed by the governor of the state of New York, attended a meeting of the commission at Chattanooga during the last week in August. They also attended the sessions of the Association of American Law Schools held on the occasion of the meeting of the American Bar Association at Chattanooga during the first week in September.

The Library

During the past summer many changes have been made in the distribution of the collections in the University libraries. The new arrangements have been made possible by the removal of the law library and Law School, and the departments of economics, sociology and history, to Kent Hall. The entire first floor of Kent Hall is given up to the law library, and there are stacks below sufficient to accommodate 100,000 volumes.

The rooms in the main library building formerly occupied by the law library are now used as a periodical reading room. The removal to this room of the bound sets of periodicals has given space in the general reading room for many important additions to the reference collection.

The north and west wings of the third floor of the library are now available for library purposes. In the north wing the collections of oriental languages, philosophy, and classics, have been shelved; the west wing is devoted to history. Adjoining the book shelves are attractive study rooms.

In Kent Hall, there have been opened reading rooms containing small collections of books and periodicals relating to history, sociology and economics.

It is interesting to note that the College Study, in Hamilton Hall, designed for the use of undergraduates, is used by an average of 250 students daily. The collection consists of only about 6,000 volumes, but they are so well appreciated that a circulation of 40,000 volumes a year is recorded.

At the annual meeting of the New York State Library Association, held at Sagamore, Lake George, in September, the librarian of the university, who was president of the association for the year 1909–1910, delivered an address on "The librarian as an educator."

Frederick C. Hicks, superintendent of reading rooms, addressed the association on "The relation of special libraries to university and public libraries."

Miss H. B. Prescott, supervisor of the Cataloging Department was elected secretary of the association for the ensuing year.

At the annual meeting of the American Library Association the university librarian presided over the meetings of the college and reference sections and was elected a Vice-president of the association for the year 1910–11.

DEPARTMENT OF MATHEMATICS

The staff of the department has been increased by the appointments of Dr. W. B. Fite and Dr. H. E. Hawkes to be professors of mathematics, and Dr. N. J. Lennes and Dr. H. B. Curtis, to be instructors, the appointment of Dr. Curtis being in Barnard College. The appointment of Professors Hawkes and Fite was noted in the June number of the QUARTERLY. In 1907 Dr. Lennes gained the doctorate in the University of Chicago, where he held a fellowship in mathematics during the year 1903–04. He served as instructor in the University of Chicago during the Summer Quarters of 1906 and 1907, in the Massachusetts Institute of Technology in 1907–08 and 1909–10, and in

Brown University in 1908–09. Dr. Lennes is joint author (with Professor Slaught, of the University of Chicago) of several text-books of elementary mathematics and (with Professor Veblen, of Princeton University) of a work on "Infinitesimal analysis." Dr. Curtis was a graduate student and holder of a scholarship and a fellowship at Cornell University from 1908 to 1910. He received the degree of Ph.D. in June, 1910, the subject of the dissertation being "Hyperabelian functions expressible by theta series."

At the October meeting of the University Council the degree of Doctor of Philosophy was granted to Mr. H. W. Reddick. Dr. Reddick's dissertation, entitled "Systems of tautochrones in a general field of force," appeared in the October number of the *American Journal of Mathematics.*

At recent meetings of the American Mathematical Society, Professor Kasner presented papers entitled "Conformal invariants of curvilinear angles," and "The converse of the theorem of Thomson and Tait." The October number of the *American Journal of Mathematics* contains his article on "The general transformation theory of differential elements."

As President of the American delegation to the International Commission on the Teaching of Mathematics, Professor Smith has been active during the year in securing the reports of the various committees. All of the important reports are now in hand, and the work of editing is proceeding. It is expected that these will be published by the Bureau of Education in the course of the coming year. Professor Smith has in press a work on "The teaching of geometry"; one in collaboration with Mr. Mikami, of Japan, on "The history of Japanese mathematics," and one in collaboration with Professor L. C. Karpinski, of the University of Michigan, on "The history of Hindu-Arabic numerals."

Professor Upton spent the summer in Paris, completing the study of mathematical instruction in the secondary, higher and technical schools of France, which he commenced there during his recent sabbatical year. He was also a special delegate to the meeting of the International Commission on the Teaching of Mathematics.

At the October meeting of the Council of the American Mathematical Society Professor Keyser was nominated for membership in the Council for the years 1911–1913.

Mr. Siceloff has been appointed by the head of the department departmental secretary for the current year.

For years the advanced work of the department has been embarrassed by the fact that the department has not had an adequate departmental library and reading-room. The embarrassment has increased with the increase in the number of advanced students. The number of students at present taking one or more graduate courses in mathematics is fifty-seven. Happily the embarrassment is now to be relieved by the librarian of the university, who has assigned a room in the Library Building where graduate students and officers can have ready access to the literature of mathematics, including both the magnificent mathematical library belonging to the university and the thirty-five hundred volumes and one hundred and seventy exchanges belonging to the American Mathematical Society.

The department has for some years conducted a Colloquium of the officers and advanced students for the presentation of papers and the discussion of topics of common interest. The meetings, held at intervals of from two to three weeks, have proved to be of much interest and value, and the Colloquium has been again organized, with Professor Keyser as chairman and Professor Fiske as secretary. The opening session was attended by eighty-five persons.

For the accommodation of students wishing to enter upon the scientific study of statistics, a course in the mathematics of statistics has been given for some years. This year, the course, which is being given by Professor Grove, will give special attention to applications of interest to students of economics, anthropology, biology and other subjects involving statistical methods of research.

One of the most striking phenomena in the progress of science teaching is the steady downward movement into undergraduate curricula of ideas and doctrines formerly reserved for graduate students and a similar movement from later to earlier undergraduate years. The phenomenon is well exemplified in the contention of an article by Professor Hawkes on "Mathematics in the college course," in the September number of the *Educational Review*. Professor Hawkes has accepted appointment as associate examiner in mathematics on the College Entrance Examination Board.

Department of Mining

During the past year Professor Munroe has been secretary of the Mining and Metallurgical Society of America and has attended the monthly meetings of the New York Section of this Society, and taken active part in the discussions and committee work of this organization.

During the year he has also held the office of President of the Society for the Promotion of Engineering Education, and as the Chairman of the Programme Committee had charge of the arrangements for the Annual Meeting held in June at Madison, Wisconsin. He presided at that meeting and delivered an address on "Efficiency in engineering education" which served as an introduction to a symposium on that subject. He also organized a second symposium on the "Teaching of calculus."

Professor Peele has been engaged during the year on a revision of his "Compressed air for mines" and has added much new and valuable material to that book. Professor Peele is now absent on leave for the first half year.

In June the regular summer class in underground surveying with 51 students was held at the Orchard mine and the Teabo shaft of the Wharton Steel Company, at Wharton, New Jersey. In this work Professor Munroe had the assistance of Professor Kurtz and Instructor Judd, with a group of six temporary assistants, M. C. Browne, H. L. Carr, J. I. Kane, J. Maller, C. F. Schnepp, and F. A. Wardlaw.

On the completion of this work the class was divided into small sections of from two to four men and assigned to various mines throughout the country for the study of mine plant and underground work. For this work students visited mines in Ohio, West Virginia, Tennessee, Michigan, Missouri, Colorado, Utah, Wyoming, Montana, California, British Columbia, and Mexico.

During the year a photographic laboratory has been equipped in the attic of the School of Mines building and an expert photographer was engaged, the expense being divided between several departments and a large amount of work accomplished, including the making of negatives, lantern slides, blueprints and bromide enlargements.

Department of Mineralogy

During the past year several important subjects were investigated the results of which have in part been published, among these may be mentioned: "The verneuil synthetic sapphires" by Professor Moses; an account of this study was published in the *American Journal of Science,* Volume 30, page 271, 1910. The immense deposits of marl in Virginia were also the subject of an investigation by Professor Moses with a view to their utilization for the manufacture of portland cement; a process for reducing the percentage of silica was devised, resulting in the manufacture of a very satisfactory material.

Two new schemes for determining minerals have been under consideration, and the results in one have been published by A. J. Moses under the title: "A guide to the sight recognition of seventy important minerals," *School of Mines Quarterly,* Volume 31, pp. 355 to 380. The other scheme is progressing favorably, and will deal with the practical recognition of minerals by the study of crushed fragments under the microscope.

Messrs. Canfield, Hillebrand and Schaller, in the *American Journal of Science,* Volume 31, p. 202, describes a newly discovered mineral under the name of "Mosesite." The mineral which is a mercury-ammonium compound containing chlorine and the sulphate group, from the Terlingua District, Texas, is named in honor of Professor Alfred J. Moses of the university, who first definitely described the mercury minerals of that district.

An undergraduate course in mineralogy, about equivalent to that given in Columbia College to chemists, has been started in Barnard College. The necessary specimens and models are for the present provided by the department of mineralogy.

Department of Music

The enrollment of students in the department of music is much larger than in former years. The total number of students taking the courses in the history and theory of music is 176, while a number have also registered for the chorus and orchestra.

The tentative plans for concerts this winter include a series of five chamber music concerts by a company of distinguished artists headed by Mr. Arthur Whiting, which will show historically the development of the art. These concerts have been given at Yale, Harvard, Princeton, Cornell, Amherst and other eastern colleges. At Columbia heretofore a similar series has been given by the department. The Whiting series will begin in December and one concert a month be given.

The organ recitals will start as usual in January and will include recitals by Walter Henry Hall, of Teacher's College, Felix Lamond, of the Extension Department, Frank E. Ward of the Department of Music, Wm. J. Krafft, of the Summer Session, and others. These recitals will close in May with the usual recital of the students.

Department of Neurology

The resignation of Professor Pearce Bailey was accepted by the faculty in October, and Dr. J. Ramsay Hunt, formerly of Cornell, was appointed associate professor of neurology is his place. Dr. Ramsay Hunt also assumes the position of chief-of-clinic, made vacant by the resignation of Dr. R. H. Cunningham, and will conduct the teaching of the students in sections in the department of neurology. He will also deliver some lectures in the months of February and March to the fourth-year students. Dr. L. Pierce Clark has resigned from the position as clinical assistant at the Vanderbilt Clinic.

A volume of publications from the department of neurology will appear in the month of December, containing articles by Professor Starr and from a number of the clinical assistants, and a review of the work of the Vanderbilt Clinic by Dr. Smith Ely Jelliffe. The contributions on neurology from the department during the past year have been so numerous as to warrant this publication. Much interest has been shown in the work of the laboratory of psychical research under Dr. E. W. Scripture. Dr. Scripture spent the summer studying with Dr. Jung, in Zurich, and is pursuing investigations along the lines of psycho-analysis in his department of the clinic. Much success has been achieved in the instruction of children afflicted by defects of speech in this department of the clinic, to which subject Dr. Scripture has given particular attention and upon which he has published a number of valuable articles.

Department of Ophthalmology

William A. DuBois, Matthew B. DuBois and Katharine DuBois, sons and daughter of Dr. Abram DuBois, have recently presented to the university the sum of $18,000 for the establishment of a permanent fund, to be called " The Doctor Abram DuBois Memorial Fund." The income of this fund is to be used for a scholarship in ophthalmology. It will be open to candidates of the College of Physicians and Surgeons who have satisfactorily completed a term of service of at least one year as interne in a hospital, during which the whole, or greater part of his time shall have been devoted to the subject of diseases of the eye. The nominee is expected to give evidence of a serious intention to pursue ophthalmology as a specialty, and the holder of the scholarship is expected to devote himself to post-graduate studies in diseases of the eye in foreign or American universities.

Department of Philosophy

Professor Montague's course in contemporary philosophy will take up this year the study of Bergson (first half) and the new realists (second half). With Mr. Pitkin he has attended conferences of the Realistic Association at Princeton, Woods Hole and Cambridge.

Professor Miller preached in the University Chapel at Princeton on Sunday, October 2d, and in the Chapel of Union Theological Seminary on Sunday, November 13th.

Messrs. Montague, Pitkin and Miller engaged during the session of 1909–10 in an investigation of an Italian medium, on whose phenomena several favorable reports by scientific men in Europe had appeared. They secured the cooperation of Professors Hallock, Peterson and Wilson of Columbia, Professors Dana of Cornell Medical College, Trowbridge of Princeton, and Wood of Johns Hopkins. Their report was published in *Science*.

Two sittings were subsequently arranged by Professor Jastrow, visiting lecturer on Psychology, and Professor Miller. The report of these was also published. The issue of the investigation was unfavorable.

Department of Physical Education

The required courses in physical education for Freshmen and Sophomores were conducted on South Field from the opening of college until about the middle of November. About eight hundred students registered in the two courses and received instruction two hours a week, in the various forms of track and field athletics. The courses are conducted in the gymnasium during the remainder of the year.

Since most of the eastern universities and colleges have built fine swimming pools, our own pool has been barred for inter-collegiate swimming meets, on account of its semi-circular shape. This defect has been remedied by building platforms at the ends, exactly seventy-five feet apart. As a result of the improvement to the pool and of providing coaches for the swimming and water-polo teams, there has been a marked revival of interest in these sports and the Inter-collegiate Swimming Association has voted to hold the inter-collegiate championship swimming meet in our pool, the first week in March.

There is a plan on foot to open the gymnasium at least three evenings a week for the benefit of students living in the dormitories and for young alumni who are unable to take their exercise before six o'clock.

Several changes have been made is the staff. Some of the new men appointed this year are—Franklin C. Fette, Ph.B., B.P.E., T. B.

Kirkpatrick, B.S., and Dexter W. Draper, M.D. Professor Meylan will be absent on sabbatical leave during the second semester; his work will be carried on by Dr. Skarstrom and Dr. Draper.

DEPARTMENT OF PHYSICS

Professor William Hallock has returned to active work after his half year's leave of absence, which he spent in Europe. While away Professor Hallock visited and studied many of the most important laboratories of universities and scientific institutions.

The appointment of Dr. Percy Hodge as assistant professor of mechanics has much strengthened the teaching staff on the side of undergraduate mechanics.

Professor Hodge has had a very broad scientific training and comes to us with a most excellent record as a teacher. After taking the degree of A.B. at Western Reserve University he spent two years studying chemistry at the Case School of Applied Science; worked at commercial chemistry for the Otis Steel Company and the Orasselli Chemical Company; then taught high school physics and chemistry for five years. He then went to Harvard and spent a year in studying physics and mathematics; from there to Cornell, where he received the doctor's degree in 1908 while at the same time serving as instructor in physics. His investigations have been mainly on the subject of fluorescence. For the past two years he has been instructor in applied mechanics in the department of civil engineering at Cornell University.

Mr. G. A. Scott, B.S., University of Wisconsin, formerly instructor in physics, University of Maine, has been appointed assistant in the place of Mr. W. A. Mitchell, who resigned to return to his professorship of physics in Soochow College, China. Mr. Julian C. Hines, B.S., University of North Carolina, also has been appointed assistant to succeed Mr. Ancel St. John, who resigned to become professor of physics in Emory and Henry College, Va.

DEPARTMENT OF PHYSIOLOGY

The work of this department in the Summer Session is constantly meeting with greater favor. The three courses, offered by Professor Burton-Opitz during the past summer, were attended by sixty-six students. Each year some of the summer students continue their work in the department during the winter. There are now nineteen graduate students working for the higher degrees. Professor Burton-Opitz is giving a new course on the physiology of the eye to students in optometry. Professor Lee spent the latter part of the summer in Europe. Besides visiting several of the laboratories, he presented the results of his investigations on the causation of the treppe and on the summation of stimuli, before the British Association for the Advancement of Science in Sheffield, and the International Physiological Congress in Vienna. He has recently been appointed to the Jesup Lectureship for 1911, and will deliver eight or ten lectures during the months of February and March on "Scientific Features of Modern Medicine."

Department of Psychology

Of last year's junior members of the department, Mr. Breitwieser has become professor of psychology in Colorado College, and Mr. Rice has taken an administrative position in Pratt Institute.

A welcome addition has been made to the department in the person of Dr. Frederic Lyman Wells, A.B. Columbia, 1903, Ph.D., 1906. Dr. Wells was assistant in the psychological laboratory in 1906, and lecturer in experimental psychology in Barnard College in 1907. He then accepted a position in the McLean Hospital, Waverley, Mass., as assistant in pathological psychology, and had large opportunities for research in this specialty, on which he is now lecturing here.

Department of Romance Languages

On June 16 Professor Cohn delivered in the Descartes Amphitheatre in the Sorbonne, a lecture upon the "Development of university intercourse between France and the United States." The platform was occupied by Dean Croiset of the Faculty of Letters, who introduced the lecturer, by Messrs. Léon Bourgeois and Bienvenu-Martin, former Ministers of Public Instruction, by Dr. Bayet, Director of University Instruction in the Ministry of Public Instruction, and Professor Boutroux, who had just returned from giving his course of lectures in Harvard, and who is now the Director of the Thiers Foundation in Paris.

Dr. A. A. Livingston resigned his position as instructor in the romance department at the close of the last academic year to accept a call to Cornell as assistant professor of romance languages and curator of the famous Dante collection in the possession of that University. The vacancy thus created has been filled by the appointment of Mr. Edouard Joseph Fortier. Mr. Fortier was graduated with the degree of A.B. from Tulane University in 1904. After spending two years as graduate student in Johns Hopkins University he accepted an instructorship in Romance languages at Yale University, there remaining one year 1906–1907, at the close of which he received an appointment as associate in the University of Illinois. He remained there until the end of the year 1909–1910. He is the son of one of the best known Romance scholars in the United States, Professor Alcée Fortier of Tulane University.

The total registration in courses in Romance languages at the present day is 829, composed as follows: Undergraduate courses, French, Columbia College, 283; Barnard College, 288; Teachers College, 60. Italian, Columbia College, 16; Barnard College, 18. Spanish, Columbia College, 29; Barnard College, 25. Graduate courses, 110. During the Summer Session the attendance was, men students, 109; women students, 159; total, 268. Grand total for 1910–1911, exclusive of extension students, 1,097.

CATALOGUE OF WORKS OF ART BELONGING TO COLUMBIA UNIVERSITY—PART IV

Architectural Accessories and Minor Works

This article is the fourth in a series of catalogues of works of art belonging to the University. The previous articles are: "A catalogue of Buildings," by Dean Frederick A. Goetze, which was published in the "Annual Reports for 1908" and in a separate pamphlet; "A Catalogue of Portraits," by Edward R. Smith and C. A. Nelson, Columbia University Quarterly, Volume X, pp. 314–410; a "Catalogue of Works in Sculpture," by Edward R. Smith, Columbia University Quarterly, Volume XI, pp. 508–520.

The Minutes of the Trustees and the official record of gifts and endowments, which is kept in the office of the Secretary of the University, enumerate all the gifts received by the University in whatever form.

It is the purpose of the catalogues now being published to furnish not only a complete list of the works of art belonging to the University, but also a permanent and public record of the names of the donors, and of the men whose genius, intelligence and skill have contributed to the usefulness and beauty of the University.

The material in Teachers College, and its subordinate schools, is not included in this instalment.

FOUNTAINS

Fountain and exedra, base and setting of the statue of Great God Pan (see E. R. S. Cat. of Sculp., Col. Univ. Quar., vol. xi, 1909, p. 508) in the Grove at the corner of 120th St. & Amsterdam Ave.; a block of dark green Ascutney Vermont granite with three jets from bronze lion's heads; basin with plants below; exedra in pink New Jersey granite on a circular foundation paved with pebble concrete; behind, on the pavement, a bronze bas-relief, Triton and Cupid from Clodion; designed and made under the direction of McKim, Mead and White; gift of Edward Severin Clark, recorded Dec., 1907: completed in the Spring of 1908; formally presented with the statue on Commencement day 1908. Bib. Col. Univ. Quar., vol. x, 1907, p. 124; ill. opp. p. 423; Gifts and Endowments, Secretary's copy, p. 163.

Fountains: two in South Court; of pink granite from Stony Creek, Conn.; vasque, or upper basin, in one piece, 6 ft. 6 in. high, 9 ft. in diameter, lower basin on level of court, 16 ft. in diameter; designed and made under the direction of McKim, Mead and White; given by an anonymous donor; accepted by the Trustees Nov. 5, 1906. Bib. Gifts and Endowments, Secretary's copy p. 158.

Fountain, Darling Memorial: in the corridor of the Library, southwestern corner, against inner wall; bowl and stand in Hauteville marble, 3 ft. 6½ in. high; bowl 3 ft. in diameter; spout, bronze dolphin on ball on conventional plant in center of bowl, 1 ft. 7 in. high; designed and made by McKim, Mead and White; given by the late Edward A. Darling, formerly superintendent of Building and Grounds, through the administrator of his estate; accepted by the Trustees of Columbia University, Dec., 1903; inscription in bronze Roman capital letters raised on rim; "Given by Edward A. Darling in memory of his wife Edith Pennington." Bib. Col. Univ. Quar., vol. vi, p. 111; Gifts and Endowments, Secretary's copy, p. 131.

Fountain: between Hamilton Hall and Hartley Hall; a simple niche, with granite basin on level of pavement; spout, head of lioness in stone; designed and executed by McKim, Mead and White. Erected with Hamilton Hall.

WINDOWS.

Windows: group of three; pictorial: in the chancel of St. Paul's chapel; in colored and painted glass, 10 ft. 3 in. high by 5 ft. wide, with circular top; subject: Saint Paul preaching at Athens; inscription in central panel below, ΑΓΝΩΣΤΩ ΘΕΩ; in left and right panels, Greek texts in capital letters; designed and made by John Lafarge; presented by the donors of the chapel, Olivia Egleston Phelps Stokes and Caroline Phelps Stokes; accepted at the December meeting of the Trustees 1906; dedicated with the chapel Feb. 3, 1907. Bib. John B. Pine; Windows of St. Paul's chapel; Col. Univ. Quar., vol. viii, 1906, p. 137; description in editorial, p. 437, see also vol. ix, 1906, p. 162; Gifts and Endowments, Secretary's copy, p. 160.

Windows: sixteen, in the clerestory at the base of the dome of St. Paul's Chapel; *en grisaille,* with bright colored glass, 3 ft. 6 in. high by 2 ft. 4 in. wide, with circular top; similar in design, with slight variations in decorative details, and suitable arms and inscriptions; designed and made by Maitland Armstrong & Co.; presented as memorials to the following alumni: members of *Van Cortlandt family* who were alumni; by Robt. B. Van Cortlandt, class of 1882: *Anthony Lispenard,* class of 1761, by Lispenard Stewart, Law 1878. *Abraham de Peyster,* class of 1763; by widow and children of Frederic de Peyster: *Egbert Benson,* class of 1765; by Julien T. Davies, class of 1866, Law 1868, A.M.: *Gerard Beekman,* class of 1766; by Gerard Beekman class 1864, Law 1867: *Philip Pell,* class of 1770; by Howland Pell: *Thomas Barclay,* class of 1772 by George L. Rives, class of 1868, Law 1872, A.M., Trustee: *De Witt Clinton,* class 1786; by Charles Clinton, Alexander Clinton, and De Witt Clinton: *William C. Rhinelander,* class of 1808; by Wm. Rhinelander Stewart, law 1873: *Nathaniel Greene Pendleton,* class of 1813; by Pendleton family through Francis K. Pendleton: *Nicholas Fish,* Trustee 1817–33; by Stuyvesant Fish, class of 1871, A.M.: *Gouverneur M. Ogden,* class of 1833; by David B. Ogden, class of 1869, law 1871: *Robert Browne Minturn,* class of 1856; by Mrs. Robt. B. Minturn: *Ambrose C. Kingsland,* class 1856, A.M. and *George L. Kingsland,* class 1856, A.M., by Mrs. Ambrose C. Kingsland and Mrs. George E. Kingsland: *Mahlon Sands* and *Philip J. Sands,* class of 1861; by Mrs. A. B. Sands: *Louis M. Cheesman,* class of 1878; by Dr. T. M. Cheesman, class of 1874, M.D. 1878, and Mrs. George Riggs. Bib. John B. Pine; The windows of St. Paul's Chapel; Col. Univ. Quar., vol. viii, 1906, p. 137, ill. opp. p. 138, and various notes in "University Legislation"; Gifts and Endowments, Secretary's copy, p. 151.

Window: Memorial; in center of eastern side of the College Study, Hamilton Hall; round top 14 ft. 2 in. high by 7 ft. 6 in. wide, *en grisaille* with colored glass decorations; in upper field the university seal with its inscription in a wreath with crown above; inscription in cartouche below in Roman capital letters "Presented to Hamilton Hall by the class of 1882 Columbia College"; designed and executed by Maitland Armstrong & Co.; presented by the class of 1882 on Commencement day, June, 1907. Bib. presentation speech of W. T. Lawson, class of 1882, Law 1885, Col. Univ. Quar., vol. ix, 1907, p. 450; ill. opp. p. 451.

Window: memorial to *Robert R. Livingston,* class 1765; in Livingston Hall, reception room, Amsterdam Avenue side to the right; designed and made by George Maynard under the direction of McKim, Mead and White; *en grisaille* with border in yellow glass, in the Italian Renaissance style; in the center, a portrait of Chancellor Livingston in rectangular panel surrounded by a wreath; inscription below in panel, in Roman capital letters; "Robert R. Livingston, class of 1765; first chandellor of the state of New York 1777–1801, United States Minister Plenipotentiary to France 1801–1804"; presented by John Henry Livingston, class of 1869, Law 1871, Edward de Peyster Livingston, class of 1882, Law

1884, and Goodhue Livingston; class of 1888, Architecture 1892, and Mrs. Robert E. Livingston. Bib. Col. Univ. Quar., vol. xii, 1909, p. 126; Gifts and Endowments, Secretary's copy, p. 180.

Window: pictorial; originally in the western end of the old Library building in Forty-ninth street, now in the reception room of Hartley Hall, east side to the right; designed and made by Tiffany Glass Co., formerly Louis C. Tiffany & Co.; round top, in the center the full figure of Vergil in the style of a classic statue; inscriptions below in panel "Vergil" "Class 1891"; border in light glass; presented by the class of 1891 in that year. Bib. Gifts and Endowments, Secretary's copy, p. 30.

Window: pictorial; originally in the western end of the old Library in Forty-ninth street; now in the reception room, Hartley Hall, west side to left; round top, designed by Louis C. Tiffany & Co., in the center, full figure of Sophocles copied from the Lateran statue, border of light glass; inscription on panel below "Sophocles," class 1885; presented by the class of 1885 in that year. Bib. Gifts and Endowments, Secretary's copy, p. 25.

Window: pictorial; originally in the eastern end of main room of the old Library in Forty-ninth street, now in Commons dining room southern side; in two parts: on the left a standing figure holding a book and wreath, with a group of books below; inscription in cartouche in panel in Roman capital letters "Columbia '87"; on the right, angel flying to right above holding a crown in the left hand, figure kneeling to left below; inscription in Roman capital letters on the scroll below "Semper ita vivamus ut rationem reddendam nobis arbitremur"; below on scroll about cartouche, supported by Gothic ornament "In ardua virtus"; inscription across both lights below. "In memoriam Mariae Parsons Hankey in literis baccalaureus Collegii Columbiae Novi Eboraci obit Jan XXIX, MDCCCLXXXVIII": presented by James Hankey in 1890. Bib. Gifts and Endowments, Secretary's copy, p. 28.

TORCHÈRES

Torchères: memorial to William Simpson Sloan, class of 1882; on granite supports at either side of the main approach to the Library building, 8 ft. high; bronze with clusters of nine electric lights in globes; a copy, one third larger than the original, of a Roman candelabrum, formerly in the Jenkins collection in Rome, now in the Vatican; by Edward F. Caldwell & Co., under the direction of McKim, Mead and White; inscription on bases of both torchères in Roman capital letters raised "In Memoriam William Simpson Sloan, class 1882," presented by Samuel Sloan as a memorial to his son; accepted November, 1905. Bib. Piranesi, vol. 12, pl. 50; Col. Univ. Quar., vol. ix, 1907, p. 404; Gifts and Endowments, Secretary's copy, p. 149.

Torchères: four in the vestibule of the library; bronze, in elaborate Roman style, with single globes; designed and executed by Edward F. Caldwell & Co. under the direction of McKim, Mead and White; made and placed in the Library at its completion in 1897.

Torchères: sixteen, four in each corner pavillion of the corridor of the Library; bronze, Pompeian style, 8 ft. high, tall and slender, single globe; designed and executed by Edward F. Caldwell under the direction of McKim, Mead and White; made and placed in the Library building at its completion, October, 1897.

Torchères: before St. Paul's Chapel. See E. R. S. Catalog of Sculpture; Col. Univ. Quar., vol. xi, 1908–09, p. 508.

Torchères: on either side of the approach to Earl Hall, eastern façade; bronze, heavy Roman style, 7 ft. high; cluster of five globes; designed by McKim, Mead and White and executed by John Williams; made and placed when Earl Hall was finished in 1900.

Torchères: on either side of door of Havemeyer Hall, south façade; bronze, elaborate Roman style, 10 ft. high, single globe, surmounted by an eagle; executed by John Williams under the direction of McKim, Mead and White; made and placed on the completion of Havemeyer Hall, October, 1897.

Torchères: on either side of door of Schermerhorn Hall, southern façade; similar to those before Havemeyer Hall; placed at the completion of Schermerhorn Hall, October, 1897.

Torchères: two pairs, on either side of the main doors of Fayerweather Hall, western façade, bronze, Roman style, 10 ft. high, single globe, surmounted by an eagle; executed by John Williams under the direction of McKim, Mead and White; placed on the completion of Fayerweather Hall in 1897.

Torchères: on either side of the main door of School of Engineering building, eastern façade; similar to those before Fayerweather Hall; placed on the completion of the building in 1897.

Torchères: on either side of the door of the School of Mines building, eastern façade; similar to those of Fayerweather Hall; inscription, repeated on bases, in raised Roman capital letters: "Given by class of 1882, School of Mines, on the twenty-fifth anniversary of its graduation"; accepted by the Trustees, Mar. 4, 1907; presented on Commencement day, 1907. Bib. COL. UNIV. QUAR., vol. ix, 1907, pp. 402, 449. Gifts and Endowments, Secretary's copy, p. 161.

Torchères: two pairs, in South Court on either side of eastern, and western approaches; bronze, in Roman style, 10 ft. high, with single globe surmounted by an eagle; executed by John Williams under the direction of McKim, Mead and White; placed at the completion of South Court, 1897.

GATES AND GRILLES

Gate: memorial to Herbert Mapes, class of 1890, School of Mines 1892; western entrance to grove; wrought iron, designed by Thomas Nash, Class of 1882; executed by John Williams; inscription on stone pier to right in Roman capital letters incised; "In Memoriam Herbert Mapes, '90 Arts, '92 Mines"; public presentation in 1895 by classes of 1890–92 on Commencement day, 1898. Bib. presentation speech by Lloyd Collis, Class of 1894, COL. UNIV. QUAR., vol. i, 1898, p. 18; Gifts and Endowments, Secretary's copy, p. 43.

Gate: northern entrance to grove, wrought iron, designed by McKim, Mead and White, executed by John Williams; inscription upon gate itself in Roman capital letters, raised; "Class of 1882"; presented by the class of 1882 on Commencement day, 1898. Bib. presentation speech of Girard Romaine, class of 1882, COL. UNIV. QUAR., vol. i, 1898, p. 18; Gifts and Endowments, Secretary's copy, p. 53.

Grille: three, in the main entrance of Hamilton Hall, southern facade, wrought iron, 14 ft. high, each door 6 ft. 8 in. wide; on stone piers four lamps in wrought iron on brackets, suggested by those of the Strozzi Palace in Florence; designed by McKim, Mead and White and executed by Richey, Browne and Donald; a beautiful design in fine scroll work in panels, in the center of each panel a crown, the crowns in the second row from the bottom bearing the number "80"; inscriptions, in circles about the crowns in small gilt Roman capital letters on each gate, "Class of 1880"; accepted by the Trustees, June 3, 1907. Above are the three seals of the corporation carved in stone at the expense of the College Alumni Association (see E. R. S. Catalog of Sculpture, COL. UNIV. QUAR., vol. xi, p. 508). Bib. COL. UNIV. QUAR., vol. ix, 1907, p. 271; ill. opp. p. 271; Gifts and Endowments, Secretary's copy, p. 163.

Grilles, iron: three in the main entrances to Kent Hall, executed by Winslow brothers under the direction of McKim, Mead and White. Completed with the building in the summer of 1910.

FLAGSTAFFS

Flagstaff: at the western extremity of terrace before the Library; designed by McKim, Mead and White; octagonal sub-base in limestone surrounded by a seat; bronze wreath enclosing post badge on southern side of sub-base; bronze base elaborately decorated; wooden mast, 80 ft. high, surmounted by a gilded eagle, 4 ft. tip to tip of wings; carries the United States flag; inscriptions; on eastern side of stone sub-base, in bronze Roman letters raised, "Presented to Columbia University by Lafayette Post No. 140, Dep't of N. Y. Grand Army of the Republic"; on the western side "Anno Domini MDCCCXCVI"; on north side "Love, cherish, defend it" in bronze wreath; presented by the Lafayette Post in 1896. Bib. Gifts and Endowments, Secretary's copy, p. 48; Minutes of Trustees, XV–23, XV–115.

Note: The national flag is displayed daily and is half-masted in case of national mourning.

Flagstaff: at eastern extremity of terrace before the Library; octagonal sub-base of limestone, surrounded by a seat; raised bronze wreath on northern and southern vertical faces; bronze base elaborately decorated; Georgia pine mast, 80 ft. high, surmounted by a gilded crown; carries the university flag, white crown on blue field; inscriptions in raised bronze Roman capital letters on western vertical face of stone sub-base; "Erected by the class of 1881 of Columbia University; College, Mines, Political Science"; on eastern side "Dedicated Commencement Day 1906." Bib. presentation speech by Charles M. Lum, president of class 1881 College; COL. UNIV. QUAR., vol. viii, 1906, p. 381. Note: The University flag is displayed on all University occasions and half-masted to indicate University mourning.

VARIOUS

Clock and **Door:** Dean's office, Hamilton Hall; the frame or reveal of Botticino marble with a wide splay decorated with panels and floriated rosettes; door itself of quartered oak, a single panel set in face wall of marble; clock, marble face, bronze hands and numbers, in arch above, set in marble tympanum perforated, and decorated with scrolls and cornucopiae; below and above door, panel with crown supported by rinceaux in relief; designed and executed by McKim, Mead and White; inscriptions, above in raised Roman capital letters gilded, "To commemorate the twenty-fifth anniversary of the graduation of the class of eighty-four Columbia College"; given by the class of 1884, College; accepted by the Trustees, March 1909; publicly presented Commencement day 1909. Presentation speech by Barclay E. V. McCarty '84, Bib. COL. UNIV. QUAR., vol. xi, 1909, p. 450; see also p. 242. Gifts and Endowments, Secretary's copy, p. 130.

Organ: in St. Paul's Chapel, on either side of the choir; made by the Ernest M. Skinner Co. under the direction of Howells and Stokes, architects of the building; given by George Foster Peabody and Charles J. Peabody; accepted by the Trustees June 5, 1905. Bib. Gifts and Endowments, Secretary's copy, p. 196.

Mantel: formerly in the Brennan homestead near 84th St. and the North River, now in the Librarian's office, Columbia University; wood, colonial style with typical decoration, painted black; supposed to be the mantel before which Edgar Allen Poe wrote his poem the "Raven"; gift of William Hemstreet of Brooklyn, accepted by the Trustees Feb. 3, 1908. Bib. Charles Alexander Nelson; "Edgar Allen Poe 'Raven' mantel"; COL. UNIV. QUAR., vol x, 1908 p. 193; also acceptance by Trustees; COL. UNIV. QUAR., vol. x, 1905, p. 232; Gifts and Endowments, Secretary's copy, p. 168.

Clock: over book case in center of the main reading room, Library; bronze, four-faced, surmounted by an eagle with open wings pointing above, supported by bronze scroll work suggested by the iron work of the fountain of the Certosa di Val d'Ema near Florence; executed by John Williams under the direction of McKim, Mead and White; given by the class of 1874 College; accepted by the Trustees March 5, 1900. Bib. Acceptance by the Trustees COL. UNIV. QUAR., vol. ii, 1900, p. 312. Gifts and Endowments, Secretary's copy p. 99.

Sun-dial: South Field center of northern side, given by the class of 1885; designed by McKim, Mead and White, presented at Commencement 1910. Bib. Acceptance by Trustees COL. UNIV. QUAR., vol. xii, 1910, p. 361. Gifts and Endowments, Secretary's copy, p. 188. Not yet completed.

Door Plate of Henry O. Avery: see E. R. S. Catalog of Sculpture COL. UNIV. QUAR., vol. xi, p. 508.

Cabinet: massive Japanese cabinet for photographs in the corridor before the door of the Avery Library; designed and executed in cherry wood by J. Numashima of Japan; in imitation of the Karamon of the shrine of the Japanese general Ieyasu at Nikko; a modern Japanese work, and much of it excellent; presented by Seth Sprague Terry, Miss Terry, W. I. Walter, Thomas E. Kirby, Gustavus T. Kirby, '95, and Frank W. Savin; from the estate of Joseph W. Sprague of Louisville, Kentucky, whose collections were sold at the American Art galleries, Dec. 4–8, 1900. Bib. American Art Association; Catalogue of the valuable art collection . . . gathered . . . by the late Joseph W. Sprague: New York 1900, no. 1012; Gifts and Endowments, Secretary's copy, p. 106.

Cabinet: in Schermerhorn Hall, Geological Museum; containing fossil insects in copal and amber; made of ebonized wood, elabortely inlaid with ivory, upper part glazed; presented by H. A. deMeli; one of the first scholars of the School of Mines.

Crown, in Trustees' room, library, over mantel. It formerly hung over the entrance arch of the reading room of the old library in forty-ninth street. "The crown, which is of copper, was, by tradition, made to surmount the flagstaff of the College when it was known as Kings College prior to the Revolution. How it survived the Revolution no one knows, but it was undoubtedly carried to 49th street when the College was moved from Park Place, and preserved in the Library. The tradition has clung to it so firmly that we are justified in asserting it to be contemporary with the royal charter. It is undoubtedly of considerable antiquity, as shown by its workmanship and appearance, and no other origin seems possible. The tradition should be perpetuated." John B. Pine.

Vase; in Japanese cloissonnè enamel, 4 ft. 7 in. high, 1 ft. 9 in. in diameter, with sculptured figures; Japanese stand in carved wood, with marble top, 1 ft. 10½ in. high by 1 ft. 9½ in. wide; designed and made in Japan; in the corridor of the Avery Library; presented by Mr. Jiroschichi Aburatani and his associates in the Columbia Club of Japanese students, "in partial recognition of the opportunities offered to students of Japan by Columbia University"; accepted by the Trustees at the November meeting in 1904. Bib. Col. Univ. Quar., vol. vii, 1904 p. 68; Gifts and Endowments, Secretary's copy, p. 141.

Screen, Chinese, in carved wood, with figures, birds and decoration, and much inlay of mother of pearl, in which are small Chinese inscriptions; in the Librarian's office, Library, gift of Mr. Chin Yung Yen and his associates among the students of the Chinese government in New York, accepted by the Trustees at the November meeting, 1904. Bib. Col. Univ. Quar., vol. vii, 1904, p. 68; Gifts and Endowments, Secretary's copy, p. 141.

Sword: blade of bronze, handle of ivory and bronze gilt; a restoration of a sword found at Mykenae, original in the Museum, Athens; in a glass case, Avery Library; inscription in Roman capital letters incised, "Sword of Agamemnon, duplicate restored for Paris Exposition 1900; gift to Columbia University, U. S. A., from J. Ackermann Coles, A.B., M.D., Tiffany & Co."; accepted by the Trustees, Feb. 4, 1901, Bib. Col. Univ. Quar., vol. iii, March 1901, p. 210; Gifts and Endowments, Secretary's copy, p. 141.

Seal of the university: in the corridor, vestibule of library; relief in bronze set in pavement, 3 ft. in diameter, executed under the direction of McKim, Mead and White, when the library building was erected in 1897.

Signs of the zodiac, see E. R. S. Catalogue of sculpture Col. Univ. Quar., vol. xi, 1909, p. 508.

Ball: suspended above the center of the main reading room; 7 ft. 6 in. in diameter, wood, painted white; lighted by eight searchlights in the galleries.

TABLETS AND INSCRIPTIONS

Tablet, memorial to Henry O. Avery; in Avery Library eastern end, center; bronze with simple moulded border, 18¾ inches high by 12½ inches wide; inscription in Roman capital letters. incised "In memory of our beloved associate Henry Ogden Avery, and in recognition of the generous provision made in his name, here and elsewhere, for the more thorough study of the art which he loved and served; we the members of the Architectural League of New York have set up this tablet on the first anniversary of his death XXX April MDCCCLXXXXI.

Tablet in memory of Hamilton Fish of the class of 1895; see E. R. S. Catalog of Sculpture, Col. Univ. Quar., vol. xi, p. 508.

Tablet; memorial to Prof. Thomas Egleston, in Mineralogical Museum, Schermerhorn Hall, eastern side; bronze; inscription, "To perpetuate the memory of Thomas Egleston, E.M., Ph.D., LL.D., founder of the School of Mines, Columbia University; born 1832, died 1900; graduate of Yale College and of the École des Mines of Paris; Professor of Mineralogy and Metallurgy in this university 1864–1900; officer of the Legion of Honor of the Republic of France; vestryman of Trinity church, author, patriot and philanthropist. His life was devoted to science and to the welfare of his country. This tablet is erected by his brother, George Washington Egleston." Presented by George W. Egleston in June, 1900. Bib. Note of acceptance by Trustees in Col. Univ. Quar., vol. ii, 1900, p. 394. Gifts and Endowments, Secretary's copy, p. 105.

Inscription, in memory of Charles Follen McKim (1847–1909), Litt. D. (Columbia 1904), in the center of the pavement of South Court; a slab of polished pink granite from Stony Creek, Conn.; bearing an inscription in bronze Roman capital letters, raised, "Charles Follen McKim, architect; MDCCCXLVII–MDCCCCIX. Desuper artificis spectant monumenta per annos"; presented as an anonymous memorial by two firms who have done much work for Columbia University under Mr. McKim's direction. The tablet was suggested by President Butler and installed by the Trustees.

Tablet, commemorative; in Fayerweather Hall, northern vestibule wall to left; in marble; inscription in Roman capital letters incised, "Fayerweather Hall, named in honor of Daniel B. Fayerweather, a liberal benefactor of the University, and of education in the United States, 1887."

Inscription, commemorative: in Havemeyer Hall, in raised bronze Roman capital letters set in the pavement of the vestibule, "Havemeyer Hall, a memorial of Frederick Christian Havemeyer of the class of 1825; erected by Frederick C. Havemeyer, Theodore A. Havemeyer, Thomas J. Havemeyer, Henry O. Havemeyer, Kate B. Belloni, Louisa Jackson, Charles H. Senff, 1896." Bib. Col. Univ. Quar., vol. vii, p. 386.

Inscription, commemorative: in Schermerhorn Hall, in raised bronze Roman capital letters set in the floor of the vestibule; "Schermerhorn Hall, erected by William C. Schermerhorn A.M., of the class of 1840, a trustee of Columbia College from 1860–1903; presented by Frederick Augustus Schermerhorn, science 1868, E.M., 1870. Bib. Acceptance by Trustees, Col. Univ. Quar., vol. vii, 1905, p. 384.

Inscription, commemorative: School of Mines building; in raised Roman capital letters placed in the floor of the vestibule by the university; "1904, this building is the gift of Adolph Lewisohn of New York to advance the science of mining and metallurgy."

Inscription; Hamilton Hall; southern facade to the left of the door, in Roman capital letters incised "Hujus colegii olim regalis nunc Columbiae dicti regio diplomate an. dom. MDCCLIIII, constituti in honorem dei optimi maximi atq. in ecclesiae reiq. publicae emolumentum, primus hic lapis positus est, Sept., die XXVII an. dom. MDCCCCV."

Tablet, large, in bronze; on the street front of the main building of the College of Physicians and Surgeons in fifty-ninth street; inscription in raised Roman capital letters "College of Physicians and Surgeons, chartered 1807, occupied this land and building, the gift of William Henry Vanderbilt, 1887."

Tablet, in the study, College of Physicians and Surgeons, in fifty-ninth street, in the center of the western wall; in commemoration of soldiers from the College of Physicians and Surgeons who died in the Cuban war, 1898–1899. Bronze, rectangular, with decorated top; inscription in raised Roman capital letters; erected by a committee of the Association of the Alumni of the College of Physicians and Surgeons; presented in May, 1902. Bib. Description of the unveiling ceremony, with the full text of the inscription in Col. Univ. Quar., vol. iv, 1902, p. 302.

Tablet, commemorative; in the center of southern wall, study of the College of Physicians and Surgeons; White marble with inscription in black Roman capital letters incised. "Haec Mea ornamenta sunt. Gorham Beales, William C. Calhoun, Henry H. Curtiss, Horatio W. Gridley, Henry W. Porter, Lefroy Ravenhill, John Snowden, Francis Bullock, Francis P. Colton, Enoch Green, Elihu T. Hedges, A. Judson Rand, David Seligman, Sidney B. Worth, students of the College of Physicians and Surgeons, died of pestilential disease while serving in the public hospitals of New York. This tablet is erected by the faculty, that the memory of these martyrs of humanity may not die, and that taught by their example, the graduates of the College may never hesitate to hazard life in the performance of professional duties."

Tablets: two in the vestibule of the main building of the College of Physicians and Surgeons, in Siena marble with inscription in black Roman capital letters incised; to the right; "This college was chartered by the regents of the University of the state of New York, March 12, 1807; and was constituted the medical department of Columbia University June 8, 1860"; to the left "Locations of the college since its foundation; no. 18 Robinson St., 1807–1809; no. 12 Magazine St., 1809–1813; no. 3 Barclay St., 1813–1837; no. 67 Crosby St., 1837–1856; 101 East twenty-third St., 1856–1887; 437 West fifty-seventh St., 1887.

Tablet: commemorating the names of donors; in the Sloane Maternity Hospital in fifty-ninth street; west, vestibule to right; bronze, rectangular; inscription in raised Roman capital letters, "In recognition of the wise liberality of William Douglas Sloane, and Emily Thorn Vanderbilt Sloane, in building and endowing the Sloane Maternity Hospital, for the benefit of humanity and for the advancement of medical education, the Trustees of Columbia University in the City of New York have erected this tablet, 1900."

Inscription: before the door in the vestibule of the Library in raised bronze Roman capital letters "This building is a memorial of Abiel Abbot Low, a citizen of Brooklyn and a merchant of New York; born in Salem, Mass. Feb. VII–MDCCCXI, died in Brooklyn, N. Y., January VII, MDCCCXCIII." Placed when the building was completed in 1897.

Inscription: Kent Hall, center of vestibule, in raised bronze Roman capital letters set in marble "This building is named in honor of James Kent, first professor of law in Columbia College, chancellor of the state of New York 1763–1847," placed when Kent Hall was finished, in 1910.

Tablet: at the northeastern corner of Fayerweather Hall, Amsterdam Avenue front; rectangular, 2 ft. 9 in. long by 2 ft. 2½ in. high; bronze, with moulded border, inscription in Roman capital letters "To commemorate New York city defenses during the war of 1812; barrier gate McGowan's Pass, barrier gate Manhattanville, forts, Clinton, Fish and Haight, and the stone towers; also in honor of Maj. Gen. Garrit Hopper Striker (then captain) erected by S. D. 1812, Empire State Society Feb. 22, 1900." Presented by the Society of the Daughters of 1812. Bib. Gifts and Endowments, Secretary's copy, p. 97.

Tablet: commemorative, at West Broadway and Murray St. on the west front of the building of Lazarus & Rosenfeld, dealers in china and glass; to commemorate the location of King's College at this point: plain, rectangular, 4 ft. wide by 3 ft. high, with a simple moulded border, crown in relief above, "1755–1857" in moulded wreath on either side above; inscription in raised Roman capital letters, "King's College, founded by royal charter in 1754, in the reign of George II, and re-established in 1784 by the people of the state of New York under the name of Columbia College, occupied this site from August 1755 to May 1857; erected by the Trustees of Columbia University in June 1900." Bib. Col. Univ. Quar., June, 1900, vol. II, p. 271, ill. opp. p. 271.

Tablet: at Madison Ave. and forty-ninth street, New York city, originally on the Berkely School building, now on the Madison avenue front of the New Weston Apartment building; to commemorate the occupation of this site by Columbia College; plain with raised Gothic moulding, pointed above, rectangular below, 2 ft. ½ in. wide, 2 ft. high; bronze; inscription in raised Roman capital letters "Columbia College chartered in 1754 as King's College occupied this site from May 1857 to October 1897" erected by the Trustees of Columbia University in 1900.

Bib. Col. Univ. Quar., vol. ii, 1900, p. 271, ill. opp. p. 271.

FURNISHINGS OF ST. PAUL'S CHAPEL

Chandeliers, four: bronze; hung one in each of the four main arches supporting the dome; designed with two horizontal rings of electric lights; completed and placed in 1907; presented with the building.

Brackets for electric lights; two on each of the main piers, fine bronze leafage, having each 7 electric lights; presented with the building.

Lamp, sanctuary; hung by chains, over the center of the Choir, composed of an alabaster bowl in a bronze frame, lighted by electricity; illuminated during the day, but not ordinarily at night except for services; presented with the building in 1907.

Lantern, in the porch, heavy bronze, gilt, and glass, presented with the building.

Pulpit: to the left on entering the Choir; in Italian walnut, carved and decorated with fine intarsia work in various woods, by M. and F. Coppede, of Florence, Italy, under direction of Howells and Stokes, architects; presented with the building in 1907.

Sounding Board over the pulpit, horizontal, draped in red velvet ornamented with gold guipure, and hung from large bronze bracket fastened to the face of the pier; presented by I. N. Phelps Stokes.

Lectern, to the right in front of the Choir; marble base with two small mediaeval lions, stem and desk in bronze; presented by I. N. Phelps Stokes.

Litany Desk: to the right on entering the Choir; in Italian walnut, carved in the Renaissance style, and decorated with intarsia in various woods; inscription in Roman capital letters inlaid on the shelf above, "In Memory of Charles R. Swords, 1829, Trustee 1870." On frieze in front "I. H. S."

Stalls: on either side of the choir; ends carved, and backs inlaid with various woods. Executed in Italian walnut by M. and F. Coppede; presented with the building in 1907.

Chancel Rail: in Italian walnut, carved and inlaid with lighter woods by M. and F. Coppede; presented with the Chapel in 1907.

Altar Reading Desk; in Italian walnut, carved in the Italian Renaissance style, ornamented by an eagle with outspread wings; triangular base ornamented with intarsia work; presented by Frederick Edgar Underhill, Class of 1893.

Chairs, fixed, with canopies and desks within the rail on either side of the Chancel; in Italian walnut, carved and inlaid by the Coppede.

Altar: finely executed in Italian walnut, with carving in the Italian Renaissance style, and inlaid in lighter woods; by the Coppede; presented with the building in 1907.

Cross, Calvary; upon the Altar; a simple rectilinear cross with a square section, standing upon a base composed of three steps; bronze, cast in three pieces, the cross matt-gilded and ornamented at the intersection of the arms with a quatre-foil containing monogram *"I. H. S."* incised; the steps burnished; on the face of the lower step an inscription in incised Roman capital letters: "In Memoriam Edgar Underhill, 1840–1904, *requiescat in pace.*" On the reverse "Presented to St. Paul's Chapel, Columbia University, Sept. 21, 1908"; presented by Frederick Edgar Underhill, class of 1893; executed by the Gorham Company.

Vases: two, upon the altar; in bronze, simple, the necks decorated with strings of crosses incised; on the body of each, in front, "I H. S." in Gothic letters within a circle incised.

Book-rest: upon the Altar, brass, simple, the shelf decorated with a cross; inscription "In Memoriam Frederick Edgar Underhill 1840–1904." Presented by Mr. F. E. Underhill.

Credence Tables: in the form of wooden niches in the wall on either side of the altar. The one to the right is decorated in bronze; presented with the building in 1907.

Service: chalice; solid gold; bowl conical decorated with a sword set with a diamond, and an inscription in old English letters raised "In lumine tuo videbimus lumen"; the knop set with diamonds; base ornamented with a cross of St. George set with a diamond; a crown set with an emerald, ruby, sapphire, amethyst and topaz, and a dove incised; inscriptions on bottom "Susanna Maria Smalley MCMVI"; "Floyd Appleton in mem. promotionis ad grad Ph.D. et decen. ordinat DD"; presented through Rev. Floyd Appleton, '94, Ph.D. (Columbia, 1906). Made by the Whiting Co.

Paten: in solid gold; obverse; inscriptions on rim "Capella S. Pauli, Columbiae Universitatis"; "Apud te est fons vitae"; in the field a sword and inscription "In Memoriam Annie V. Mercer Paris, 1897" "In Pace"; presented through Rev. Floyd Appleton. Made by Tiffany & Co.

Paten: silver-gilt; obverse plain; on rim cross of St. George in a circle incised; reverse, inscriptions "In loving memory of my mother, Easter 1893" and "St. Clements"; presented through Rev. Floyd Appleton.

Cruets: two; crystal glass, marked on base T. R. P.; on stopper cross of St. George; in memory of Prof. T. R. Price; presented through Rev. Floyd Appleton.

BARNARD COLLEGE

Furniture and decoration of the Ella Weed memorial room of the Library of Barnard College, executed by the Tiffany Glass Co.; especially noticeable is the fire-place and mantel of green and pink glass mosaic in the center of the eastern side; inscription in panel above inlaid in lighter glass; "This room is dedicated to the memory of Ella Weed by the association of Alumnae of Barnard College September 1897."

Sundial: 3 ft. 6 in. high, in the campus of Barnard College, supported on Ionic colonnette in concrete, the horizontal dial and the gnomon of bronze; inscription on rim of dial in Roman capital letters, "Factis vota exequiae"; in center, "presented by class of 1907."

Case for periodicals: in Barnard College library, of wood with separate drawers for unbound volumes of periodicals, inscription on bronze plate, "Presented by the class of 1900 Barnard College June 1, 1910.

Clock: in the vestibule of Barnard College over the main door; in wood painted, square, about 18 inches on the side. Inscription around the face, "Presented by the class of 1905."

Clock: French, in glass case mounted in brass, on the mantel of the Ella Weed Memorial room of Barnard College. Inscription on the base, "Presented to Barnard College by the class of 1904."

Curtain in Brinckerhoff Theatre, in velour, old gold; presented by Class of 1898.

Inscription: in the vestibule of Barnard College over the fire-place to the right, in panel of glass mosaic, in Roman capital letters, "Milbank Hall erected and equiped in memory of Jeremiah and Elizabeth Lake Milbank, by their daughter, Elizabeth Milbank Anderson."

Class picture; water-color "Field Daisies" presented by Mrs. Alfred Meyer.

Chandelier, in the vestibule of Barnard College, round, about 3½ ft. in diameter, green glass supported by brass frame.

Tray with ewer: sheffield plate, decorated with flowers and laurels, presented by Emily O. Gibbs.

Bench: in the campus of Barnard College, in pink marble; horizontal slab resting on rectangular uprights, front decorated with ivy vine; Inscription on front of slab in Roman capital letters incised "Presented by the class of 1904."

ADDENDA TO CATALOGUE OF PORTRAITS AND SCULPTURE

Portrait: painted in oil, of *William Douglas Sloane,* founder of Sloane Maternity Hospital, by Eastman Johnston, painter (1824–1905); in the Board room of the Sloane Maternity Hospital in Fifty-ninth street. Three quarters length sitting, directed front, facing and looking three fourths to right. Presented by William Douglas Sloane in 1889.

Portrait: painted in oil, of *George Crocker* (1856–1909), founder of Crocker special cancer research fund, by M. M. Green, painter, in periodical room, Library; 2 ft. 5 in. high by 2 ft.

wide, in plain gilded frame. Signature M. M. Greene, 1910; Presented by Mrs. Charles B. Alexander. Bib. Editorial on the Crocker fund for Cancer Research, Col. Univ. Quar., vol. xii, 1910, p. 217. Gifts and Endowments, Secretary's copy, p. 189.

Bust: Portrait of *Charles Frederick Chandler,* Professor of chemistry, Columbia University, by J. Scott Hartley, sculptor; in the vestibule, Havemeyer Hall, to the right on entering; bronze, heroic size, directed front, facing front, looking front; inscription in raised Roman Capital letters on bronze plinth. "Charles Frederick Chandler, Ph.D., LL.D., M.D., D.S.C., Professor of chemistry, Columbia University, MDCCCLXIV–MCMXI. Presented by the chemists of America: signature, right side of bronze plinth, "J. Scott Hartley, fecit 1910"; gift of the Chemical Society of America, the Society of Chemical Industry, the Society for Electro-Chemistry, and the Chemists' Club of America; accepted by the Trustees, May 2, 1910. Bib. Gifts and Endowments, Secretary's copy, p. 169.

Statuette: In Kent Hall; *Civic Law,* by Maurice Constant; in bronze, 35½ inches high; a male figure, nude, with a skin about his loins, erect, right foot advanced, left hand on hip, right hand grasping a sword, which rests upon its point, head facing three quarters over left shoulder, the right thigh touches a slender pedestal, which carries a book and bears upon its front the inscription LEX; inscriptions in cartouche in front of base, "Le Droit civique par Maurice Constant"; on upper surface of base to the right, "A gift from J. Ackerman Coles, A.B., M.D., LL.D." signed "Maurice Constant," presented by Dr. Coles, '64, Oct. 28, 1910. Addendum to Chapel furnishings.

Tablet: commemorating the gift of the Chapel; on the wall to the right of entrance to the choir; in white marble, with architectural frame in the Italian Renaissance style, 4 ft. 4 in. high by 2 ft. 6 in. wide; inscription in main panel in Roman capital letters incised, "Dedicated to the Service of God, and given to Columbia University, in loving memory of James Stokes and Caroline Phelps his wife, by their daughters Olivia Egleston Phelps Stokes and Caroline Phelps Stokes, MCMVI." Bib. Col. Univ. Quar., vol. IX (1907), p. 163.

Edward R. Smith.

UNIVERSITY LEGISLATION

The Trustees

October meeting.—The thanks of the Trustees were tendered:

To M. Hartley Dodge, Class of 1903, for his gift of $2,500 to be applied to the Special Maintenance Fund for 1909–10.

To Alexander Smith Cochran for his gift of $2,500 to be applied to the Special Maintenance Fund for 1909–10.

To Clarence H. Mackay for his gift of $2,500 to be applied to the Special Maintenance Fund for 1909–10.

To William K. Vanderbilt for his gift of $2,500 to be applied to the Special Maintenance Fund for 1909–10.

To the anonymous donor of $2,000 to start a fund for alterations in the surgical laboratory, such fund to be known as the "Surgical Building Fund."

To Mrs. Louis K. McClymonds for her gift of $1,300 for the maintenance of the McClymonds Scholarships in Columbia College for the academic year 1910–11.

To Homer E. Sargent for his gift of $1,000 to be used in extending the work of James A. Teit, among the Salish tribes of the United States, under the direction of the Department of Anthropology.

To Mrs. Henry Villard for her gift of $700 to carry on investigations undertaken by the Department of Anthropology.

To Mrs. A. D. Juilliard for her gift of $500 to be used for the purchase of equipment for the Department of Practice of Medicine.

To the anonymous donor of $500 to be added to the fund for Laboratory Equipment for Pathological Surgery.

To Mrs. Henry S. Redmond for her gift of $500 to be used for the purchase of equipment for the Department of Practice of Medicine.

To the anonymous donor of $300 to be added to the Equipment Fund for the Departments of Clinical Pathology, Pathology and Anatomy.

To James Loeb for his gift of $175 for purchase of books for the Library.

To F. Augustus Schermerhorn, Class of 1868, for his gift of $150 for the maintenance of a scholarship in Columbia College for the benefit of a designated student, for the academic year 1910–11.

To Edward F. Cole, Class of 1886, for his gift of $150 to provide a graduate scholarship in the Department of History for the academic year 1910–11.

To Messrs. Isaac N. Seligman, Class of 1876, and Paul M. Warburg for their gifts of $125 each, being their contributions to the maintenance of the Columbia Table at the Zoölogical Station at Naples for the year 1910.

To Mrs. Frederick W. Vanderbilt for her gift of $100 to be used for the support of a special scholarship in Columbia College for the academic year 1910–11.

To William Fellowes Morgan, Class of 1880, for his gift of $100 to be applied toward the tuition fee for the academic year 1909–10 of a designated student in the School of Pure Science.

To the anonymous donor of $50 to be used toward a scholarship in Columbia College for the academic year 1910–11 for a designated student.

To the Coburn Players for their gift of $35 to provide a scholarship in the Summer Session of 1910.

To A. V. Williams Jackson, Class of 1883, for his gift of $100 to be applied toward the salaries for 1910–11 in the Department of Oriental Languages.

To the anonymous donor of $74 to be applied to the Medical and Surgical Nursing Funds at the Medical School for the year 1909–10.

To Dr. Wendell T. Bush, of the Department of Philosophy, for his gift of $40 to be added to the special fund for the purchase of books for the Library for 1909–10.

To Georges Renault, Class of 1883, for his gift of $20 to be applied toward salaries in the Department of Anthropology for the academic year 1910–11.

To Miss Catherine A. Janvier for

her gift of $10 to be applied toward salaries in the Department of Anthropology for the academic year 1910–11.

To Arthur von Briesen for his gift of $20 to be applied toward the salaries for 1910–11 in the Department of Anthropology.

To Wheaton B. Kunhardt, E.M., Class of 1880, for his gift to the University of a quantity of special steel for research purposes, having a value of over $500.

To John McLean Nash, Class of 1868, for his gift to the University of an illuminated manuscript of Aristotle's philosophical works.

To Miss Boyer, of New York, for her gift to the University of certain archæological specimens.

The Budget as adopted March 7, 1910, was modified by rearrangements in the Departments of Pathology, Materia Medica and Surgery and in the Summer Session.

The following appointments were made: Ferdinand Brunot, Litt.D., professor of the history of the French language in the University of Paris, visiting professor of French literature for the academic year 1910–11.

Sir Frederic Pollock, LL.D., D.C.L., lecturer on the Carpentier Foundation for the year 1911–12.

Maurice Prévôt, associate in architecture from October 1, 1910, to June 30, 1911.

Anton R. Rose, assistant in the department of biological chemistry for 1910–11.

Frederick W. Witherell, S.B., lecturer in civil engineering from August 1, 1910, to June 30, 1911.

J. F. McClelland, E.M., lecturer in mining engineering for 1910–11.

F. Lyman Wells, Ph.D., lecturer in psychology for 1910–11.

The following appointments were made under Extension Teaching: Henry W. Frohne, architecture; Charles A. Harriman, architecture; John W. Ingle, Jr., architecture; James Kip Finch, civil engineering; Edgar H. Sturtevant, classical philology; Henry A. Ruger, educational psychology; Minnie L. Bollert, English; Hugh H. Caldwell, English; Grace L. Cook, English; Frank A. Patterson, English; W. W. Fisher, English; Elvira Wood, geology; Harry V. E. Palmblad, German; A. F. Ross, American history; George Monroe Brett, mathematics; Percy Hodge, mechanics; Harvey M. Dann, Latin; *vice* H. M. Poteat, resigned; H. L. Hollingworth, psychology; Rudolphe Altrocchi, Romance languages; W. O. Farnsworth, Romance languages; Henry E. Crampton, zoölogy; Milton J. Davies, assistant to director.

The following appointments were confirmed: Henry A. Ruger, A.B., assistant professor of educational psychology in Teachers College; Percy Hodge, Ph.D., assistant professor of mechanics; Alexander Goldenweiser, assistant in anthropology; Adolph F. Bandelier, lecturer in American archæology; Charles A. Harriman, associate in architecture; John V. Van-Pelt, associate in architecture; Harvey W. Corbett, associate in architecture; Francis A. Nelson, lecturer in architecture; Richard Franz Bach, lecturer in architecture; Robert F. McCrackan, assistant in analytical chemistry; Abraham Gross, assistant in analytical chemistry; James Kip Finch, instructor in civil engineering; Harold Perrine, assistant in civil engineering; Mortimer F. Sayre, assistant in civil engineering; Roscoe Guernsey, instructor in classical philology; Eugene E. Agger, instructor in economics; Frank L. Mason, assistant in electrical engineering; Ernest H. Wright, instructor in English; Harrison R. Steeves, instructor in English; John W. Taylor, instructor in English; Allan F. Westcott, instructor in English; Bayard Boyesen, instructor in English; Frederick W. J. Heuser, instructor in Germanic languages and literatures; Henry H. L. Schulze, instructor in Germanic languages and literatures; Ernest D. Richard, lecturer on the history of German civilization; Edward M. Sait, lecturer in history; Arthur R. Maxson, instructor in mathematics; Lewis P. Siceloff, instructor in mathematics; Harry W. Reddick, instructor in mathematics; Nels J. Lennes, instructor in mathematics; William C. Krathwohl, instructor in mathematics; Joseph S. Corbett, assistant in mathematics; James E. Gray, assistant in mathematics; Arthur Lowell Herrick, instructor in mechanical engineering; Frank E. Ward, associate in music; Abraham Yohannan, lecturer in Oriental languages; Wendell T. Bush, associate in philosophy; William F. Cooley, instructor in philosophy; Matthew T. McClure, Jr., assistant in philosophy; John F. Dashiell, assistant in philosophy; Franklin C. Fette, instructor in physical education; William Skarstrom, instructor in physical education; William S. Day, lecturer in physics; Julian Colgate Hines, Jr., assistant in physics, *vice* Ancel St. John, resigned; Albert T. Poffenberger, Jr., assistant in psychology; John W. Todd, assistant in psychology; George A. Scott, assistant in physics, *vice* W. A. Mitchell, resigned; Dino Bigongiari, instructor in the Romance languages and literatures; Edward J. Fortier, instructor in the Romance languages and literatures; Nicholas A. Koenig, Gustav Gottheil lecturer in Semitic languages; Rev. Frederick A. Vanderburgh, lecturer in Semitic languages; Alvan A. Tenney, instructor in sociology; Lillian Brandt, assistant in social economy; John C. Vaughan, demonstrator of anatomy, and assistant in surgery; Charles R. L. Putnam, demonstrator of anatomy; James G. Dwyer, assistant in bacteriology, *vice* F. B. Humphreys, transferred to department of pathology; Arthur Lefferts Hutton, assistant in applied therapeutics; Ralph G. Stillman, assistant in applied therapeutics; J. Ramsay Hunt, instructor in neurology, *vice* R. H. Cunningham, resigned; Alwin M. Pappenheimer, associate in pathology; Frederick B. Humphreys, instructor in pathology, resigned as assistant in bacteriology; Frederick J. Barrett, assistant in clinical medicine; Henry James, assistant in medicine; Henry H. M. Lyle, instructor in surgery; Kirby Dwight, assistant in surgery; Dudley S. Conley, assistant in surgery.

The following appointments were confirmed under the Summer Session of 1910: Robert F. McCrackan, assistant in chemistry, *vice* Edward C. Kendall, resigned; George F. Schattinger, assistant in chemistry, *vice* Michael F. Heidelberger, resigned; Frank F. Rosenblatt, assistant in economics; J. Paul Jones Williams, instructor in engineering; Arthur Irving Taft, assistant in English, *vice* H. H. Caldwell; Charles Bishop Johnson, instructor in English; Albert C. Boyle, Jr., assistant in geology, *vice* W. L. Barrows, resigned, Milledge L. Bonham, Jr., reader in History; Edgar H. Sturtevant, assistant in Latin; Alexander B. Siegel, instructor in law, *vice* J. Waring Parks, resigned; Sara Lawrence Kellogg, instructor in library economy, *vice* Stella T. Doane, resigned; Frederick Beyerman, Jr., instructor in physical education; Burton W. Kendell, assistant in physics, *vice* W. S. Nelms, resigned; Raymond Weeks, instructor in Romance languages, *vice* E. P. Baillot, resigned; M. B. Hillegas, assistant in educational psychology; Frank W. Barber, assistant in elementary education; Hubert R. Cornish, critic teacher in elementary education, *vice* Viola Schumaker and Flora Wilbur; Mignor Levin, critic teacher in elementary education, *vice* Josephine K. Bauer, resigned; Eleanor Wright, critic teacher in elementary education; Mary Lidbetter, assistant in fine arts; Ruth Wilmot, instructor in household arts, *vice* Jane T. Fales, resigned; Anna Leland, assistant in household arts; Gardo Thompson, assistant in household arts; Laura Baldt, instructor in household arts, *vice* Elizabeth Sage, resigned; Elizabeth C. Lange, instructor in household arts, *vice* Eliza Benton, resigned; Margaret C. Hull, assistant in household arts; Helen Schwarz, assistant in industrial arts; John A. Davis, instructor in physical education; Florence L. Hurd, assistant in department of physical education; Anna C. Thornton, assistant in department of physical education; Mrs. William Heard Kilpatrick, social secretary, Teachers College.

The following assignments and vacancies were made: Ferdinand Brunot, visiting professor of French literature to a seat in the faculty of philosophy; Percy Hodge, Ph.D., assistant professor of mechanics to a seat in the faculty of applied science; The Anthon Professorship of the Latin language and literature was declared vacant.

Leaves of absence for the academic year 1910–11 were granted to Professors Adolph Black and Charles A. Strong.

The following resignation was accepted: William Adams Delano, A.B., associate in architecture, because of ill health.

November meeting.—The thanks of the Trustees were tendered to the anonymous donor of $1,500 to be added to the Special Equipment Fund for the Departments of Anatomy, Pathology and Clinical Pathology; to Adolph Lewisohn for his gift of $1,000 to be applied toward salaries in the Department of Metallurgy for the academic year 1910–11; to the anonymous donor of $500 to constitute an Indo-Iranian Fund; to the Hon. Seth Low, Class of 1870, Chairman, for the gift of $300 to be known as the Committee of Fifty Fund, for the purchase of books for the Library; to A. V. Williams Jackson, Class of 1883, for his gift of $100 for salaries in the Department of Oriental Languages for the academic year 1910–11; to the Yonkers Alumni Association for its gift of $75 for a scholarship in Columbia College for the first half year 1910–11; to J. Ackerman Coles, Class of 1864, for his gift of a bronze statuette, together with a marble pedestal.

The President submitted his Annual Report, which was accepted and ordered to be distributed.

The Committee on Buildings and Grounds was authorized to have the gymnasium kept open three evenings of the week.

The Trustees signified their adhesion to the plans for the establishment and government of an International School of American Archæology and Ethnology as agreed upon at a conference held in the City of Mexico, September 14, 1910.

Provision was made for the maintenance of a fellowship in the International School of American Archæology and Ethnology for the year 1910–11.

The Budget for 1910–11 as adopted March 4, 1910, was modified by certain rearrangements in the departments of chemistry, physical education, physics, zoölogy, buildings and grounds, and in the Summer Session.

The following appointments were made: C. D. Lay, lecturer in landscape architecture for 1910–11; Ferruccio Vitale, lecturer in landscape architecture for 1910–11; H. C. Capern, lecturer in landscape architecture for 1910–11; E. Stagg Whitin, Ph.D., assistant in social legislation for 1910–11; Robert A. Lambert, M.D., instructor in pathology; Reuben Ottenberg, M.D., assistant in biological chemistry; Clayton S. Smith, assistant in biological chemistry; William H. Welker, Ph.D., associate in biological chemistry; J. Ramsay Hunt, M.D., associate professor of neurology; Charles N. B. Camac, M.D., assistant professor of clinical medicine.

The following appointments were confirmed: Frederick W. Schwartz, B.S., laboratory assistant in chemistry; Edward Norris Milliken, A.M., assitant in chemistry; George J. Bayles, Ph.D., associate in ecclesiology.

The following appointments were made under Extension Teaching: John F. Reigart, theory and practice of teaching in elementary schools; Charles G. Simpson, elementary mathematics; Eugene E. Agger, economics; Alice T. Whyte, hygiene of the school; Gordon Hall Gerould, English; Raymond C. Osburn, zoölogy; Cecil F. Lavell, history of education.

The following assignments were made: John Erskine, Ph.D., associate professor of English, to a seat in the faculty of philosophy; E. W. Bagster-Collins, A.M., associate professor of German in Teachers College, to a seat in the faculty of philosophy.

The following promotions were made: Jacob Rosenbloom, M.D., now assistant in biological chemistry, to be associate in biological chemistry; Ernest C. Clark, A.M., now assistant in biological chemistry, to be instructor in biological chemistry; Nathaniel B. Potter, M.D., now associate in clinical medicine, to be assistant professor of clinical medicine.

The following resignations were accepted: Stanley R. Benedict, associate in biological chemistry; Matthew Steel, instructor in biological chemistry; Pearce Bailey, M.D., assistant professor of neurology.

UNIVERSITY COUNCIL

October meeting.—Professor Calvin Thomas was reelected Secretary of the Council for the academic year 1910–11.

The Acting President reported the following accessions to the membership of the Council, *ex-officio:* Frederick P. Keppel, dean of Columbia College. Professor Stone, dean of the School of Law; also the following elections, with term to expire June 30, 1913: From the faculty of Columbia College, Professor Thomas, re-elected; from the faculty of law, Professor Burdick, re-elected; from the faculty of medicine, Professor Huntingdon, re-elected; from the faculty of applied science, Professor H. S. Munroe, re-elected; from the faculty of political science, Professor Munroe Smith, re-elected; from the faculty of Teachers College, Professor Lodge, succeeding Professor Dodge.

The Acting President announced the establishment by the Trustees of a new fellowship to be called the Dr. Abram DuBois Fellowship, the nomination to be made by three members of the faculty of medicine and the award to be made annually by the Council.

Resolved, that the wording of the regulations of the University Council bearing upon the courses of the Summer Session counting for the degrees of A.M. and Ph.D. be modified so as to read as follows: "Summer Session courses or combinations of courses which have previously been approved *by the Executive Committee* of the University Council" instead of "Summer Session courses or combinations of courses which have previously been approved by the University Council."

Resolved. that the following report of a special committee be adopted: Candidates for the degree of Master of Arts who desire to count courses in Extension Teaching toward the partial fulfilment of such requirements must matriculate according to the rules of the appropriate faculties on the recommendation of the Director of Extension Teaching.

Courses or combinations of courses given by Extension Teaching which have previously been approved by the executive committee of the University Council as being equivalent to the corresponding work regularly offered under the faculties of political science, philosophy, pure science, and fine arts, may be counted toward the requirements for the degree of Master of Arts under the following conditions: (*a*) Candidates for the degree of Master of Arts must hold a baccalaureate degree in arts, letters, philosophy, or science, or an engineering degree, or an education equivalent to that represented by one of these degrees, such equivalent to be passed upon in every case by the Executive Committee of the University Council. (*b*) Candidates registered in Extension Teaching must take one course of not less than two hours a week. (*c*) When the rules of any department require additional work for the degree of Master of Arts the character and amount of such work will be made known by the officers of the department. (*d*) An aggregate attendance of eight hours a week is the minimum which may count as a full academic year of residence for the degree of Master of Arts; of this not more than half may be taken in Extension Teaching. The fulfilment of this requirement may be extended over more than one year.

Resolved, that the printed report of the special Committee of the University Council on the degree of Master of Arts, as submitted, be distributed to all members of the faculties of the University and be made a special order for a special meeting of the Council to be called by the President in November.

The Secretary reported for record that since the last Commencement twenty candidates for the degree of Master of Arts and ten candidates for the degree of Doctor of Philosophy had completed all the requirements for the degree sought and were entitled to receive diplomas.

Resolved, that a committee of five be appointed by the chair to prepare and to submit to the University Council regulations determining the conditions upon which the degree of Doctor of Law shall be conferred.

The chair appointed as such committee Professor Munroe Smith, chairman, Professors Stone, Burdick, Redfield and Goodnow.

ATHLETICS

The **General Athletic Association** issued on September 3, 1910, a financial statement for the year 1909–10, of which the following is a general summary.

Income	
Miscellaneous	$ 2,148.08
Officers	539.00
Alumni	4,580.00
Students	5,652.50

Disbursements		
Expense	$ 641.41	
Salary	583.32	
Refund	35.60	
Teams	10,623.90	
Balance in Bank (Corn Exchange)	1,035.35	
	$12,919.58	$12,919.58

The **Rowing Club** decided not to hold the Interclass Regatta on the Hudson, November 5, as originally planned, because very few men reported for the class and dormitory crews. A one mile race between Freshman College and Freshman Science crews was rowed and was won by the Science crew. Every man on the winning crew received a silver cup.

The newly elected officers of the Rowing Club are: President, E. S. J. Phillips, '11F.A.; Vice-President, S. Pitt, '11S.; Secretary, E. H. Findlay, '13S.; Undergraduate Treasurer, W. Kinney, '11; Graduate Treasurer, M. G. Bogue, '00; Graduate Directors, R. S. Pierrepont, '05, and A. W. Alexander, '09. The Freshman squad is the most promising of any for several years past.

The **Wrestling Team** have secured E. P. Kilroe, '04, as coach. Mr. Kilroe will have the assistance of Dr. Barthalon, who will instruct the heavy weight men.

The Varsity **Soccer Team,** last year's inter-collegiate champions, have started off well on their fall schedule by defeating successively the Boys' Club of Brooklyn and the Staten Island Football Club, the former by the score of 3 to 1, while the latter did not score once to our team's two goals. There is every cause for encouragement in this branch of sport, the interest being kept up while the necessary support is not lacking. From present indications, the league championship should remain at Columbia another year. The fall schedule, however, is a hard one and includes a game with Princeton.

The **Fencing Squads** began practice early in November with the largest number of candidates that ever reported for the sport. The men are working under Professor James F. Murry, Columbia's veteran coach.

A three-year contract has been signed with Harry A. Fisher, '04, to coach the **basketball team.** To Mr. Fisher much of the success of basketball at Columbia has been due, and all indications point to another championship team this year.

STUDENT LIFE

The **Mandolin Club** has secured the services of Mr. William J. Kitchener, former president of the American Guild of Banjoists, Mandolists and Guitarists, as coach for the year. With the Glee Club again under the direction of Mr. Edwards, the prospects are bright for a successful season with the musical clubs.

The **Politics Club** holds to the policy inaugurated last year of opening its monthly meeting with an informal dinner at the Faculty Club. At the October meeting President W. H. D. Pell, '09, '11L., appointed several committees; one to conduct a mock election for state officials in Earl Hall on November 1 and 2, one to investigate and make recommendations for the restriction of the use by inexperienced chauffeurs of 116th Street, between Amsterdam Avenue and Broadway, another to investigate and report on the "Big Brother" movement, and a fourth to attend and report on the hearings conducted by the Board of Estimate in preparing the city budget. Announcement was also made that men prominent in political and civic affairs will be invited to speak informally and lead discussions at the monthly dinners.

At a meeting of the **Players Club** in Earl Hall, October 20, the week beginning March 13 was chosen for the presentation of the 1911 Varsity Show. The play committee reported that several plays and numerous songs for interpolation had already been submitted.

The **Philolexian Society** produced the old English comedy, "Ralph Royster Doyster," on November 18 and 19. The comedy was staged under the direction of Professor Algernon Tassin, of the English Department.

At a meeting of the **Kings Crown** Council, November 2, ninety-two men were elected to membership. This year each applicant is obliged to submit with his application, a record of his classroom and campus activities. The elections are thus based upon "college spirit" as manifested by work for Columbia.

NECROLOGY

ANDREWS, William Henry, LL.B. 1869, died near Middletown, Connecticut, 1910, aged sixty-two years.

CROWELL, John Beverly, M.D. 1873, died in East Orange, New Jersey, 1910.

ESPENSCHIED, George S., LL.B. 1879, died in Brooklyn, New York.

GILFORD, Thomas Buchanan, A.B. 1835, died in New York, on October 6, 1910, aged ninety-four years.

GLEASON, John J., LL.B. 1877, died in Flushing, New York, on September 21, 1910.

GRANT, Hugh J., LL.B. 1876, Ex-Mayor of New York City, died in New York on November 3, 1910.

HAYES, Rev. Charles Harris, A.B. 1890, professor of apologetics at the General Theological Seminary, died in Madison, New Jersey, on August 17, 1910, aged forty-two years.

MAHONY, Daniel Patrick H., LL.B. 1877, died in New York, on October 16, 1910, aged fifty-four years.

MITCHELL, John Fulton Berrien, A.B. 1862, died in Flushing, New York, July, 1910.

PAGE, ROLPH Barlow, Ph.D. 1909, professor of history in Rutgers College, died in Toronto, Canada, on August 9, 1910.

PARKS, John Waring, A.B. 1898, LL.B. 1902, died at Saranac Lake, New York, on July 26, 1910, aged thirty-two years.

SCOFIELD, Rear Admiral Walter Keeler, M.D. 1868, U. S. N. (retired), died in Stamford, Connecticut, on August 5, 1910, aged seventy-one years.

STEIN, Rev. Alexis William, A.B. 1891, died in Saranac Lake, New York, on August 16, 1910.

WAIT, Frederick Scott, member of the Board of Trustees of Barnard College, on June 30, 1910, aged fifty-nine years.

WILSON, Francis Henry, LL.B. 1875, died in Brooklyn, New York, in September, 1910, aged sixty-six years.

WINSLOW, William B., A.B. 1857, A.M. 1860, died in Brooklyn, New York, on September 28, 1910, aged eighty-nine years.

STATISTICS

November 7, 1910

Students registered in:	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Columbia College	481	485	493	527	557	606	609	645	632	729
Freshmen	141	157	119	145	157	160	133	171	195	271
Sophomores	102	85	111	113	130	156	168	135	172	206
Juniors	98	128	112	117	112	128	141	151	108	118
Seniors	94	70	110	106	113	111	111	120	109	100
Non-matriculated	46	45	41	46	45	51	56	68	48	34
Barnard College	328	345	399	363	371	398	420	467	513	521
Freshmen	99	92	101	110	103	112	122	139	176	167
Sophomores	73	79	74	75	95	89	92	113	110	114
Juniors	48	73	81	70	77	109	115	108	121	144
Seniors	50	49	77	83	81	64	58	66	61	53
Non-matriculated	58	52	66	25	15	24	33	41	45	43
Total undergraduates	809	830	892	890	928	1004	1029	1112	1145	1250
Faculty of Political Science	142	150	143	148	174	177	210	239	251	316
Faculty of Philosophy	280	317	382	392	490	492	532	556	573	658
Faculty of Pure Science	54	57	95	160	140	139	155	158	167	193
Auditors	18	23	17	9	—	—	—	—	—	—
Total non-professional graduate students	494	547	637	709	804	808	897	953	991	1167
Schools of Mines, Engin'g and Chem.	604	685	719	589	566	524	585	677	666	713
First-year	193	222	177	156	140	137	186	211	220	186
Second-year	156	184	226	164	198	158	189	237	212	205
Third-year	127	149	146	156	112	118	123	125	146	171
Fourth-year	91	87	104	85	94	87	64	85	68	140
Non-matriculated	31	38	53	28	22	24	23	19	20	11
Graduates	6	5	13	*	*	*	*	*	*	*
Fine Arts				109	139	112	147	156	153	176
Architecture	†	†	†	74	107	87	123	131	128	155
Music	‡	‡	‡	35	32	25	24	25	25	21
Law School	443	468	384	342	277	261	247	318	318	365
First-year	165	182	104	106	70	92	85	112	100	132
Second-year	150	135	149	98	107	69	83	102	113	115
Third-year	126	129	119	127	92	85	59	76	92	92
Non-matriculated	2	22	12	11	8	15	20	28	13	26
Medical School	815	777	669	560	424	352	298	306	307	316
First-year	269	203	107	97	79	86	60	84	85	74
Second-year	199	205	164	106	83	80	67	59	72	78
Third-year	179	181	101	156	100	79	76	72	68	90
Fourth-year	148	171	178	190	152	96	80	82	70	71
Non-matriculated	20	17	29	11	10	11	15	9	12	3
College of Pharmacy				435	353	254	229	284	290	283
First-year				261	97	107	120	163	156	146
Second-year				157	232	106	90	112	123	131
Graduates				17	24	41	2	5	7	6
Non-matriculated				—	—	—	17	4	4	—
Teachers College	557	563	624	640	792	726	891	950	974	1406
First-year	17	43	29	29	24	—	—	—	—	—
Second-year	28	21	46	44	51	43	—	—	—	—
Third-year	141	155	201	237	308	273	314	353	373	473
Fourth-year	79	145	174	195	236	239	314	309	314	445
Non-matriculated	19	54	40	23	32	22	40	72	93	258
Graduates	162	83	95	99	141	149	182	216	194	230
Auditors and unclassified students	111	62	39	13	—	—	—	—	—	—
Total professional students	2419	2493	2396	2675	2551	2229	2356	2691	2708	3259
Double registration ‖	136	120	189	218	266	155	182	216	194	230
Net total resident students	3586	3750	3736	4056	4017	3886	4100	4540	4650	5446
Summer Session	579	643	1001	961	1018	1041	1392	1532	1968	2632
Double registration §	86	91	180	184	280	277	336	395	486	667
Grand total regular students	4079	4302	4557	4833	4755	4650	5156	5677	6132	7411
Students in extension courses	420	535	732	684	964	1017	3055	2879	2250	1820
Officers	449	473	509	551	573	571	646	655	687	§§726

In addition to the above there are this year 1024 pupils in the Horace Mann School and 224 in the Speyer School.

* Graduate students in applied science are now registered under the faculty of pure science.

† Students in architecture are included under mines, engineering and chemistry previous to 1904.

‡ Students in music are included under Barnard College (non-matriculated) previous to 1904.

‖ Includes candidates for University and Teachers College degrees.

§ Includes Summer Session students who returned for work in the fall.

§§ Including 78 Clinical Assistants.

It should be noted that the figures for Columbia College in 1909 and 1910 are based on the technical classification of students and not on the actual year of residence. The same is true of the figures for the Schools of Mines, Engineering and Chemistry for the year 1907, 1908, and 1909, but not for the current year.

STATISTICS

MAJOR AND MINOR SUBJECTS OF STUDENTS IN THE FACULTIES OF POLITICAL SCIENCE, PHILOSOPHY AND PURE SCIENCE, 1909–10

SUBJECTS	Political Science		Philosophy		Pure Science		Total	
	Major	Minor	Major	Minor	Major	Minor	Major	Minor
Administrative law	15	13	...	...	...	1	15	14
American history	35	14	...	6	...	...	35	20
Anatomy	...	...	...	...	6	...	6	...
Ancient history	3	2	...	3	...	...	3	5
Anthropology	...	4	1	1	...	...	1	5
Astronomy	...	...	...	...	...	7	...	7
Bacteriology	...	...	...	...	1	4	1	4
Biological chemistry	...	...	...	...	5	8	5	8
Botany	...	...	...	2	15	7	15	9
Chemistry	...	...	...	4	34	28	34	32
Chinese lang. and lit.	...	1	3	...	...	...	3	1
Civil engineering	...	...	...	...	3	2	3	2
Classical archæology	...	...	4	...	...	...	4	...
Comparative literature	...	3	9	48	...	...	9	51
Constitutional law	16	16	...	1	...	...	16	17
Education	...	8	171	118	...	18	171	144
Electrical engineering	...	...	...	...	1	4	1	4
Embryology	...	...	...	...	...	1	...	1
English	...	6	103	70	...	2	103	78
Geography	...	...	...	...	...	1	...	1
Geology	...	...	...	1	16	20	16	21
Germanic lang. and lit.	...	...	47	41	...	...	47	41
Greek (incl. archæology)	...	...	7	12	...	...	7	12
Histology	...	...	...	...	...	1	...	1
Indo-Iranian languages	...	...	1	...	...	...	1	...
International law	6	12	...	...	...	...	6	12
Latin (incl. Roman arch.)	...	1	46	20	...	...	46	21
Linguistics	...	...	...	1	...	...	...	1
Mathematical physics	...	...	...	...	4	14	4	14
Mathematics	...	...	...	11	34	10	34	21
Mechanical engineering	...	...	...	...	3	2	3	2
Mediæval history	9	12	...	1	...	...	9	13
Metallurgy	...	...	...	1	5	3	5	4
Mineralogy	...	...	...	...	1	4	1	4
Mining	...	...	...	...	...	5	...	5
Modern European history	8	19	...	9	...	...	8	28
Music	...	...	...	...	...	1	...	1
Pathology	...	...	...	...	1	...	1	...
Philosophy (incl. ethics)	...	15	44	43	...	...	44	58
Physics	...	...	...	1	23	15	23	16
Physiology	...	...	...	1	1	2	1	3
Political economy	40	38	...	3	...	1	40	42
Political philosophy	4	11	...	1	...	...	4	12
Psychology	...	3	11	22	...	2	11	27
Roman law and comp. jurisprudence	8	25	...	...	...	...	8	25
Romance lang. and lit. (incl. Celtic)	...		27	24	...	1	27	25
Semitic languages	...	2	9	5	...	...	9	7
Social economy	27	12	...	5	...	...	27	17
Sociology and statistics	66	37	...	32	...	1	66	70
Zoology	...	..		3	18	11	18	14
Total	237	254	483	490	171	176	891	920

AGGREGATE ATTENDANCE ON COURSES IN SUMMER SESSION, 1901–1910

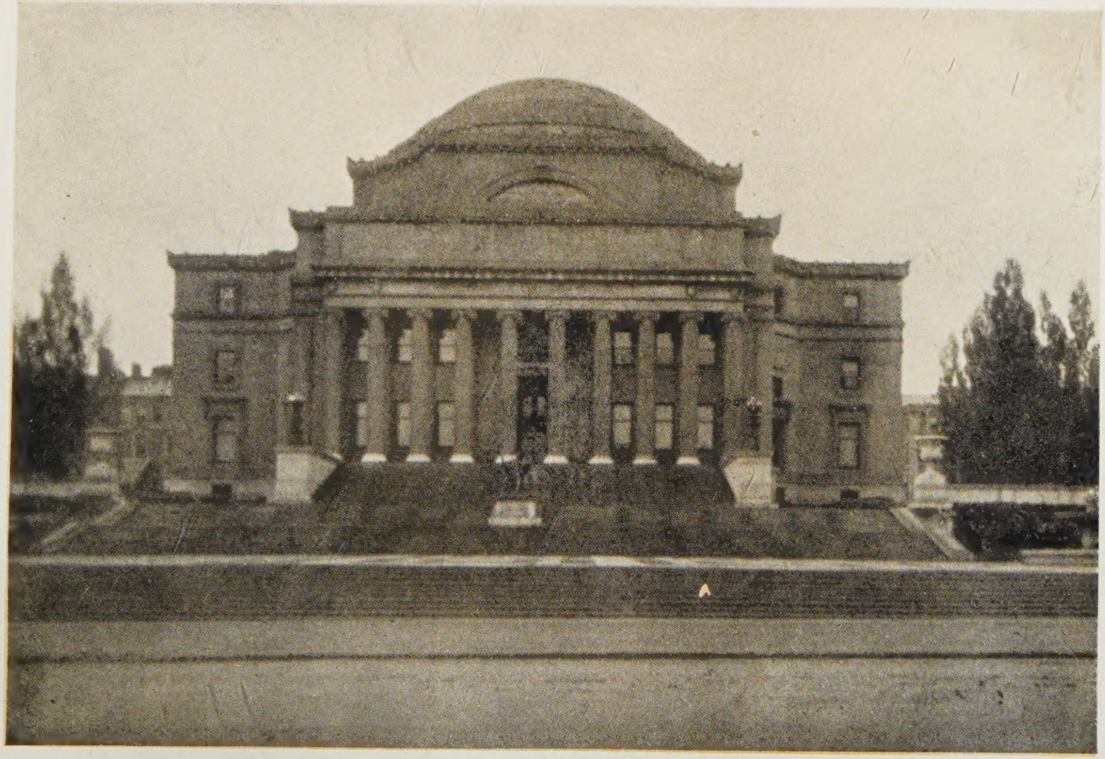
Department	Total Enrolment 1901	Total Enrolment 1902	Total Enrolment 1903	Total Enrolment 1904	Total Enrolment 1905	Total Enrolment 1906	Total Enrolment 1907	Total Enrolment 1908	Total Enrolment 1909	Total Enrolment 1910
Anthropology	—	—	13	13	—	—	—	—	—	—
Architectural and Free-hand Drawing	—	—	—	—	—	16	32	18	26	30
Biblical Literature	—	—	—	—	—	—	—	—	12	19
Botany	—	—	—	—	—	—	—	—	27	30
Chemistry	—	59	72	119	156	164	257	292	304	286
Design and Painting	—	—	—	—	—	—	—	—	114	148
Economics	—	—	21	28	12	32	35	54	97	119
Education	402	351	618	317	366	305	480	601	879	*1,630
Engineering	—	—	—	—	—	—	42	46	—	27
English	301	260	334	332	367	363	408	†313	506	532
Fine Arts	—	—	—	—	—	—	—	—	127	362
Geography	—	38	—	55	49	49	79	38	44	79
Geology	—	—	25	21	19	—	32	—	43	31
German	67	101	152	174	201	204	200	214	251	319
Greek	—	—	—	—	10	6	17	13	19	21
Hebrew	—	—	—	—	—	—	—	—	—	3
History	71	51	134	122	88	103	192	187	212	238
Household Arts‡	—	—	—	14	35	58	96	111	266	411
Industrial Arts§	44	72	112	124	134	127	146	166	202	302
Kindergarten	—	—	—	—	—	—	139	109	103	199
Latin	14	51	50	67	55	69	81	102	145	149
Law	—	—	—	—	—	—	—	—	—	81
Library Economy	—	—	—	—	—	—	—	—	—	27
Mathematics	71	108	164	217	210	199	246	340	318	282
Mechanical Drawing	—	—	—	35	38	40	44	62	51	32
Medicine	—	—	—	—	—	—	—	—	—	28
Mineralogy	—	—	—	—	—	28	—	16	—	11
Music	—	—	48	34	47	24	42	44	31	92
Nature Study	30	46	53	34	42	24	54	40	—	—
Philippine Islands	—	—	11	—	—	—	—	—	—	—
Philosophy	58	53	62	48	42	45	67	113	90	100
Philosophy and History of Religion	—	—	—	—	—	—	—	—	21	25
Physical Education	67	88	105	149	157	147	172	187	381	649
Physics and Mechanics	56	82	68	86	96	136	204	208	250	240
Physiology	—	—	10	23	19	23	25	48	54	62
Politics	—	—	—	—	—	—	—	—	—	5
Psychology	155	89	92	138	91	95	130	185	215	115
Romance Languages	20	51	110	92	114	101	189	194	218	275
Sociology	—	—	—	—	33	48	—	—	113	102
Stenography	—	—	—	—	—	—	—	—	—	24
Zoology	—	—	—	—	—	—	—	—	13	17
Total	1,356	1,500	2,254	2,248	2,381	2,406	3,409	3,701	5,018	6,954
No. of courses given	42	59	78	111	117	123	149	151	189	269

*Including courses in the teaching of English, German and mathematics.

†The apparent decrease is due to the fact that two courses previously credited to the department of English are here credited to the department of education.

‡Including courses in domestic art, 1908 and 1909, and domestic science, 1904–1909.

§Including courses in the department of manual training, 1901–1909.



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